

# MANUFACTURERS' RECORD

A Weekly

Southern Industrial and Hardware

Newspaper.

Vol. XIV. No. 13.  
WEEKLY.

BALTIMORE, NOVEMBER 3, 1888.

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## Report of the AQUEDUCT Commissioners.

[NEW CROTON AQUEDUCT, NEW YORK.]

AN ELABORATE VOLUME, CONTAINING AUTHORITATIVE TABLES BY THE CHIEF ENG., B. S. CHURCH. JUST ISSUED.

PLANT (by actual count from Table 13.)

Number of Ingersoll Drills used..... 240

Number of Drills of all other kinds used... 203

PROGRESS (by actual figures from Table 8.)

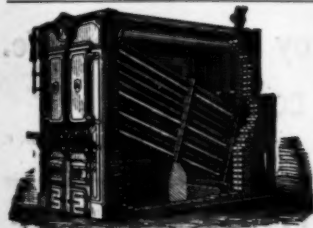
Average weekly progress in best 10 headings that used Ingersoll Drills exclusively (omitting all idle weeks)..... 38.73

Average weekly progress in best 10 headings that used other drills exclusively (omitting all idle weeks)..... 31.48

DIFFERENCE OF 30 PER CENT. IN FAVOR OF INGERSOLL DRILLS.

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V. HERRILL, 149 E. Third Street, Phila., Pa.  
WM. H. SMITH, Eng., 41 & 43 South Canal St., Chicago, Ill.  
A. S. FISKE, Eng., 34 Johnston Building, Cincinnati, O.  
A. S. FISKE, Eng., 34 Corn Exchange, Minneapolis, Minn.  
T. B. PACKER, Bridge Building, Kansas City, Mo.  
JOHN S. MOORE, 126 Gravier Street, New Orleans, La.  
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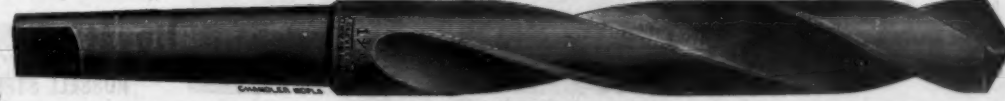
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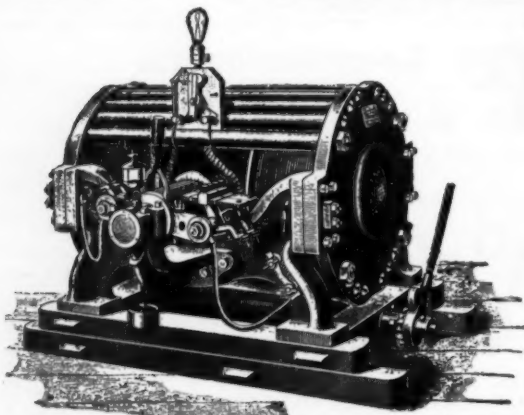
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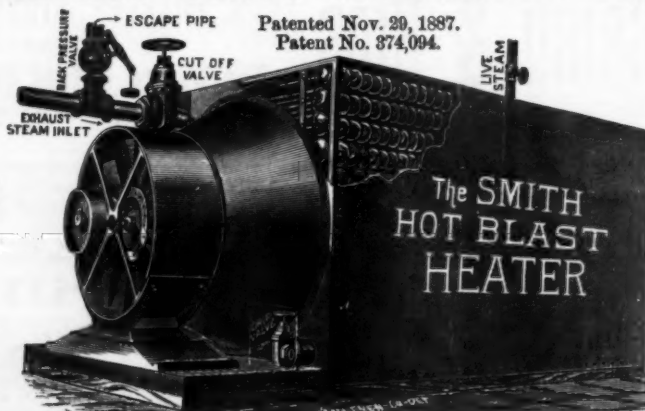
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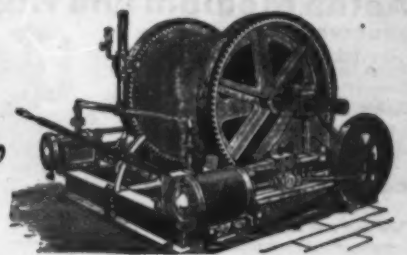
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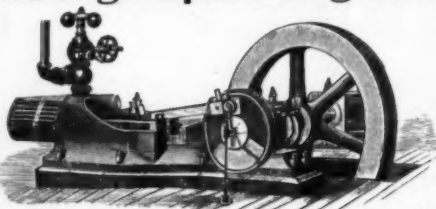
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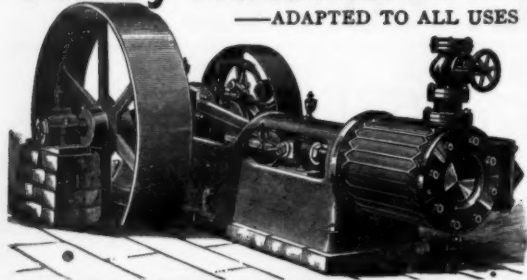
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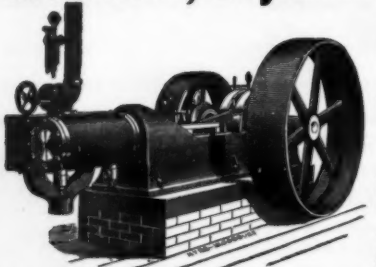
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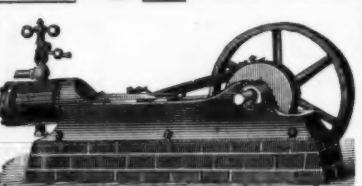
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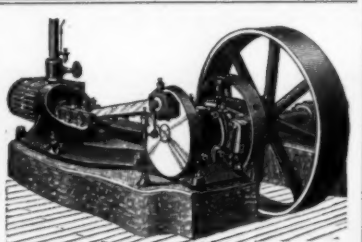
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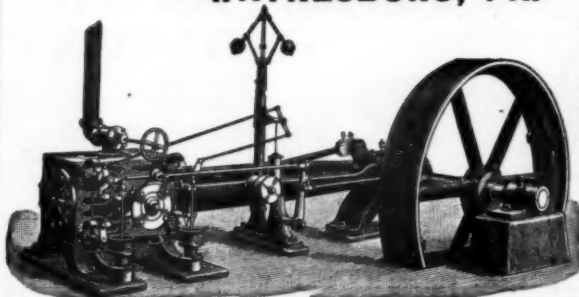
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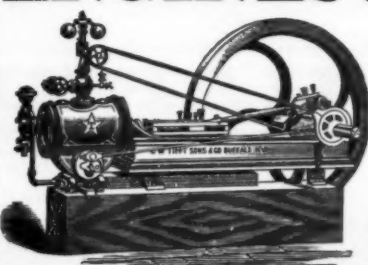
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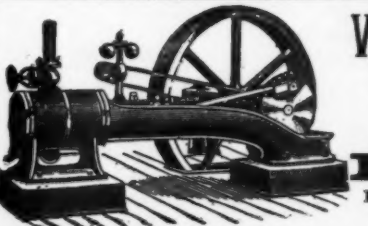
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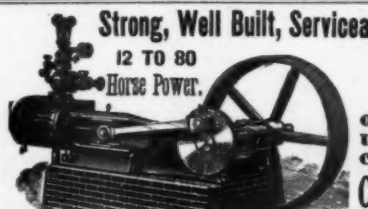
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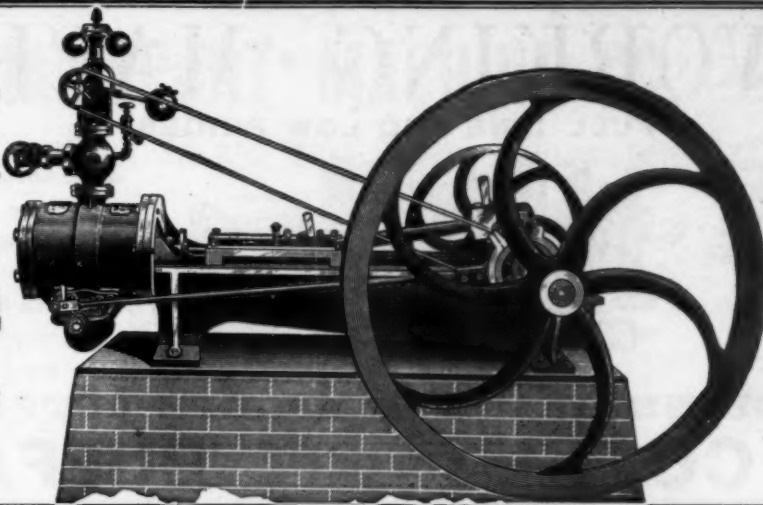
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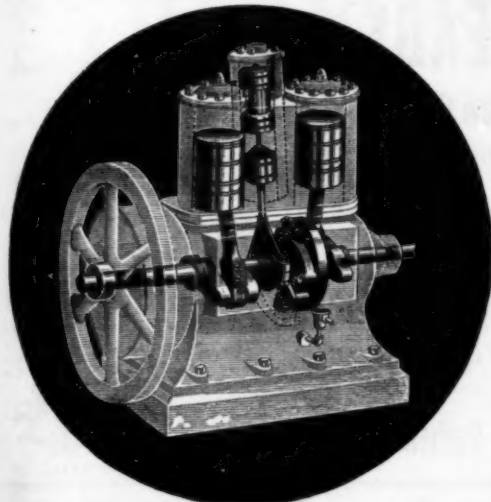
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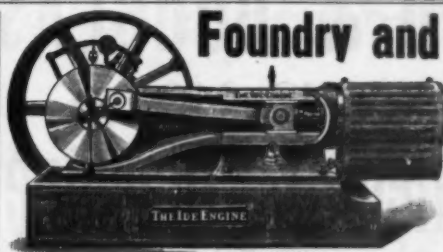
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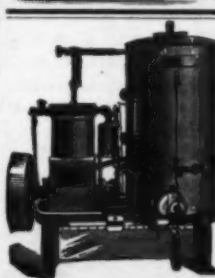
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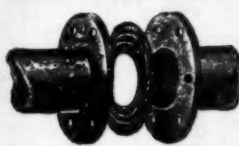
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This machine, for variety and range of work, has no equal, and for workmanship it has  
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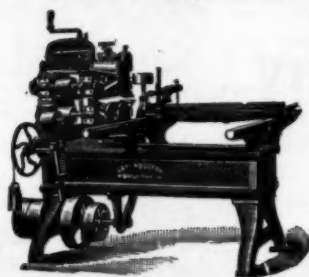
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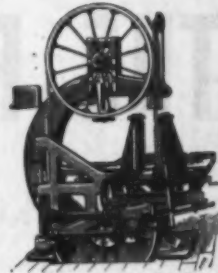
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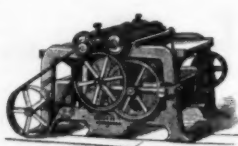
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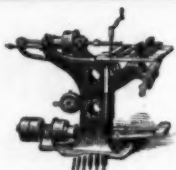
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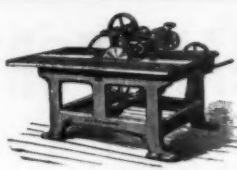
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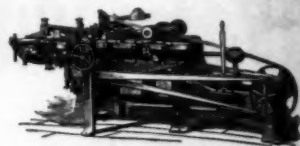
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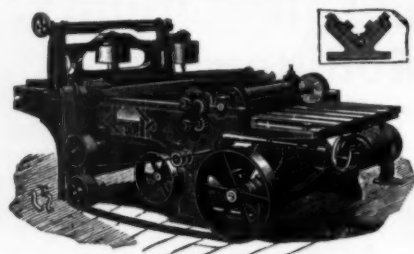
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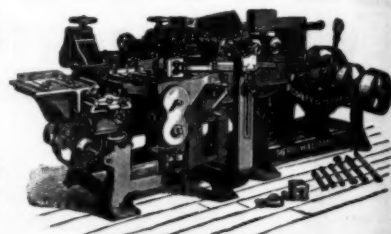
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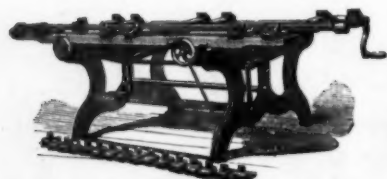
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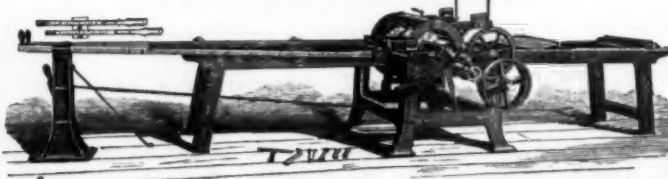
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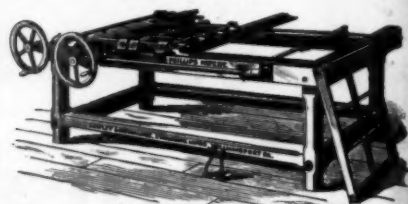
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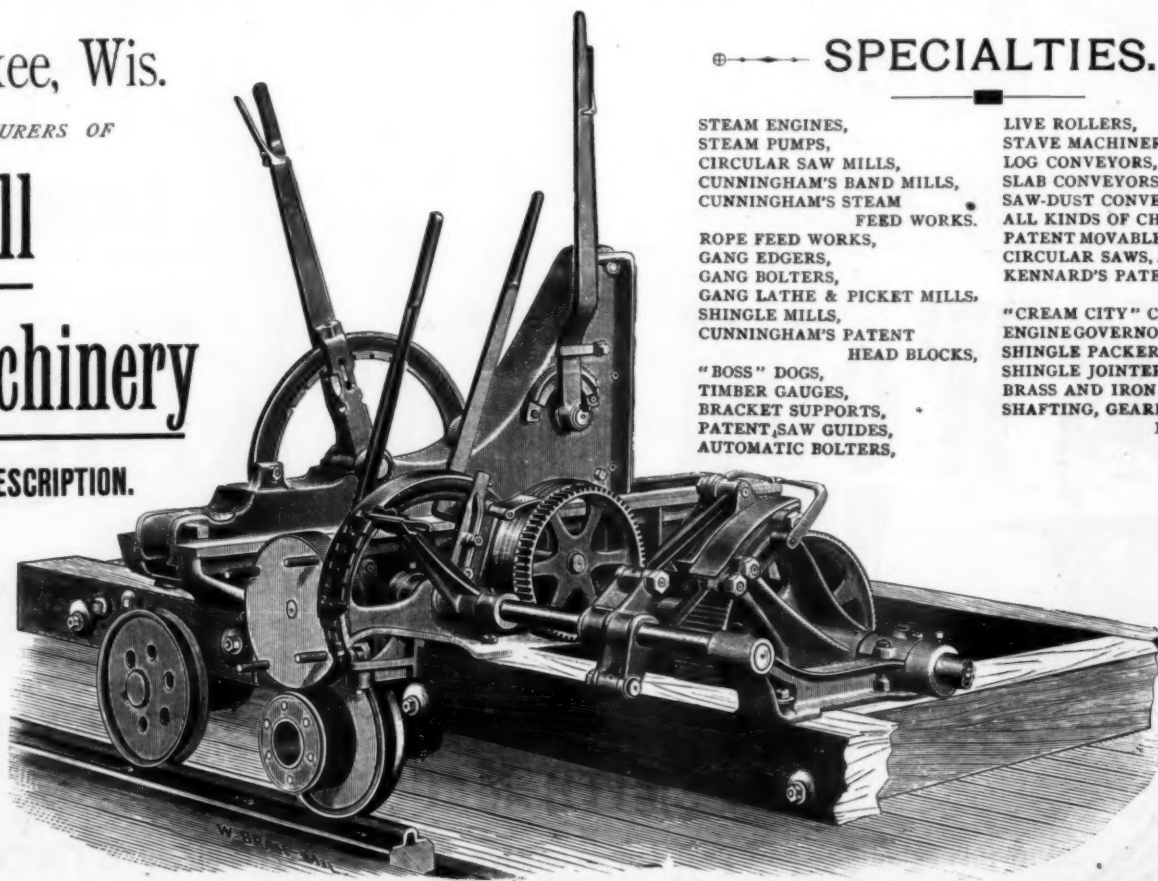
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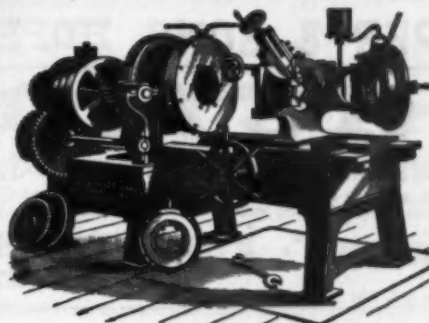


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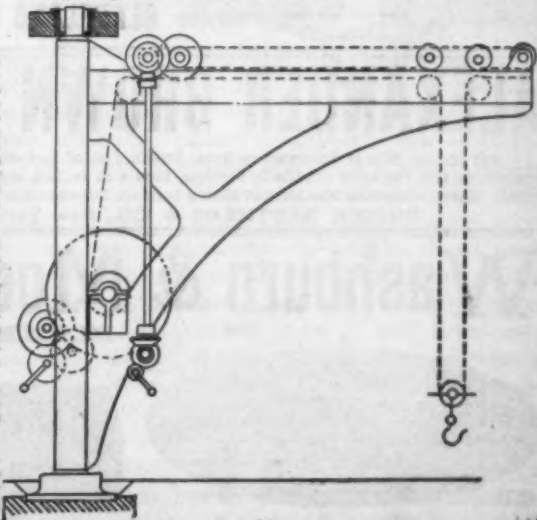
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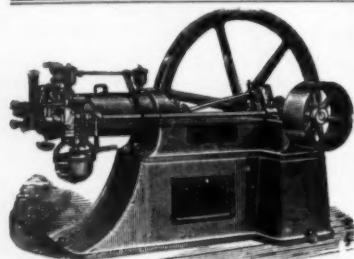
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IF you contemplate starting a new enterprise of any kind, whether it be a railroad, an iron furnace, a rolling mill, a machine shop or foundry electric light, water or gas works, saw mill, planing mill, furniture factory, fertilizer factory, cotton mill, or anything else requiring machinery of any description, send particulars to the MANUFACTURERS' RECORD. A postal card giving character of enterprise and kind of machinery wanted will be all that is needed. It will prove of great benefit to you.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

### The Outlook in Kentucky.

It is not the political outlook in Kentucky to which we refer, as that is a subject upon which the MANUFACTURERS' RECORD does not treat, but the industrial outlook, as that is to-day one of the most important matters claiming the attention of the people of that wonderfully blessed State. In natural resources and advantages of soil, climate, minerals and timber, Kentucky is probably not surpassed by any other State in the Union and is equalled by few. Realizing their advantages and the great possibilities before their State, the people of Kentucky are turning their attention to the development of their material resources. In nearly every part of the State there is an awakening spirit of energy and enterprise, and all indications point to the early coming of a period of great industrial activity. In Louisville the business men and capitalists are displaying great energy, not only in pushing their own city to the front, but in their efforts to advance the prosperity of the whole State. They have seen how the mineral developments of Alabama have revolutionized that State and added millions of dollars to its wealth, and they have determined to try to duplicate Alabama's marvelous growth. Never before in the history of Kentucky was the outlook for great progress and prosperity so brilliant as it is to-day.

### Anniston's Big Move.

A few months ago the MANUFACTURERS' RECORD suggested that one of the finest opportunities in the country for the investment of money was in the purchase by Northern capitalists of the stock of good Southern land companies. This advice has been followed, and while negotiations have been pending for some time for the purchase of the Sheffield Coal, Iron & Land Co.'s property, a deal has just been closed by which some of the heaviest capitalists in New York secure a controlling interest in the Anniston City Land Co. Connected with this is a project now practically consummated, it is believed, of establishing five or six new manufacturing enterprises, each to cost not less than \$100,000, and quite a number of small enterprises costing \$10,000 to \$25,000 each. Taken as a whole, this is one of the greatest undertakings ever successfully carried through for the development of any city in the country. These new enterprises, which we are assured will be established, will be put up by Anniston men—the men who have made that town. They are convinced, after years of practical work, of the wonderfully profitable results of iron, cotton and kindred manufactures in that city, and they have simply determined to make another great united movement for the advancement of their town. If there is a city in the country of even five times Anniston's population, which has ever at one time announced the immediate building of not less than five enterprises to cost at least \$100,000 each, we do not remember it. The moral of this whole undertaking is this: the business men of Anniston saw the opportunity of developing their town by their own work, and without waiting for others to come in, they simply decided to put over half a million dollars at once into new enterprises. It is a lesson which others may study to advantage.

THE Gadsden Alabama Furnace Co. have blown in their new iron furnace at Gadsden. About 125 tons daily will be its capacity. In referring to the blowing in of the furnace the Times-News says the following as to the good that will accrue from its operations. "When in full blast this furnace will require about 100 men to operate the plant, say nothing of the miners and coke burners; including all class of laborers, over 1,000 men will find employment. It is by thus diversifying our labor that our farmers, gardeners and fruit-growers are to find additional and more remunerative markets for their products, and in this way our mineral development will build up and enrich our State. This furnace will distribute among our people from \$1,500 to \$1,600 a day, or an amount equal to 13,675 bales of cotton annually, or twice the product of Etowah county."

Subscribe to the MANUFACTURERS' RECORD.

### Truckers' Trusts—A Suggestion.

Truck, as most readers know, is the name given to the vegetables and small fruits shipped during the winter and spring months from the South to the North. The planting, cultivating, gathering and shipping of these products of the soil afford paying employment to many thousand poor people, besides making a market for great quantities of lumber unfit for other purposes, but good enough for crates and boxes, and giving to the transportation companies thousands of car-loads of freight. This business is done in all the Gulf and South Atlantic States. The capital directly employed in it amounts to several millions of dollars. It is of the utmost importance to all concerned that it should be so managed as to insure its continuance and increase. In the past the truckers have met with many and sometimes very serious losses. There have been times when so many goods of a kind were thrown upon the market that the prices obtained for them did not cover the cost of freights, and all the previous outlay was of course an absolute loss. Early last June 9,000 crates of fresh vegetables that had been shipped by the steamer Augusta from Florida, were taken down New York harbor and thrown overboard. The week before, said the Tribune, in noticing this fact, "two thirds of all the fresh vegetables arriving from the South by steamers" were disposed of in like manner. The stuff was not spoiled, but the market was glutted. Dealers refused to accept the goods because they wished to maintain the old scale of prices. The chief of the New York stevedores told the Tribune that this was a yearly occurrence.

There is something radically wrong in a system that permits such annual losses of food and of returns to those who cultivated and shipped it. It does not follow because the New York market is overstocked, that there are not others in which such perishable goods are needed. The truckers are too much at the mercy of their commission merchants. They are in the same condition precisely that the Delaware peach growers had been for years until they organized for self protection. What they need is reliable information about all the markets in which truck is sold, about the condition and probable quantity of the crop ready for gathering, and about the quantities that are on the road and when they will reach their destinations. All these facts can be ascertained about peas, cabbages and Irish potatoes as accurately as they now are for tobacco, cotton, peaches and oranges. In addition, a reliable newspaper that would make a specialty of this industry and throughout the year give detailed information from every section, both from the fields and the markets, would be a most valuable auxiliary.

If in every trucking State from Florida to Virginia, inclusive, there were efficient organizations, ("truckers' trusts" they might be called,) and at some central point a journal devoted to their interests, nearly all these annual losses would be averted, and the profits of the business would be greatly augmented. We believe that such organizations are perfectly feasible, and that, once formed, their value would be so manifest that every year they would increase in strength, influence and efficiency. Great corporations have formed trusts, some of which are highly objectionable because they bind heavy burdens on the people, but a "truckers' trust" would be a public blessing, for it would largely do away with the uncertainties that now surround the business, and would insure to Northern markets such a wise distribution of the products of Southern market gardens, that every city and factory village of those populous States would be benefited.

THE easy-going days of the South have passed away, never to return. Its people, especially its young men, have learned to do with their might and at once whatever needs to be done. An instance in point is recorded in the local columns of the Charlotte (N. C.) Chronicle. On the first day of September the cotton compress in that city was burned. Two days later the contractor began to lay bricks where a new one was to be erected. In five weeks after the fire the new house was ready. The machinery was put up in sixteen days. The blows of the big machine now resound through the city. It was put up by J. O. White, of New Orleans, and A. A. Hand, of Charlotte, did the fitting. The Chronicle says:

"The new press is owned jointly by the Carolina Central and Richmond & Danville roads, and cost \$40,000. It will not only do better work than the old one, but will press a greater number of bales in a given time. Mr. White says that under ordinary working pressure it will flatten 800 bales per day. The platform is now loaded with cotton, and the press will be kept busy making up for lost time during the remainder of the season."

Another illustration of the same kind comes to us from Tallapoosa, Ga. A few days since the glass works there were burned. At once the owners decided to rebuild, and to guard against future losses from fire by erecting a factory of brick and iron. A contract to that effect was signed, in which the builders bonded themselves to finish the job in thirty days. These, and numerous other instances that might be adduced, illustrate the spirit that prevails through the South. It is no longer the rule to put off until the morrow whatever can be postponed, but its opposite. The South has learned that "time is money," and its people propose to use their newly acquired knowledge for all it is worth. Herein consists to a great extent the assurance of their continuous prosperity.



### Save Your Forests.

"Squandered Wealth" is the apt headline of an editorial in a recent issue of the Greenville (S. C.) Daily News, in which attention is directed to the waste of timber in the South. The News says:

"The following from the Pickens Sentinel is very sadly significant:

'Some of our mountain neighbors are selling to a timber company the right to cut and take away the poplar, pine, sweet gum and ash on their lands for more than the land is worth.'

All through this mountain country the land in many places is covered with timber, which makes it really more valuable than it would be if it had gold mines under it. The enormous and constant use of lumber is devouring the forests faster than the processes of nature can possibly repair the destruction. The demand is yearly becoming greater and the supply is yearly becoming less. It is only a matter of time when timber land will be immensely valuable.

Yet our people are destroying timber by hundreds of acres every year. Every year large bodies of land are cleared and the trees are piled together and burned to ashes to get them out of the way. It is no wonder, in these circumstances, that the mountain people eagerly trade with anybody who will offer to pay them for the right to cut and remove their trees, and are delighted by receiving more for the timber than the land is worth, not stopping to think that the timber is really the best part of the land.

We are squandering our natural wealth and strangers are receiving its value. It would not be so bad if the profit on it, or part of the profit, was made among us. As it is, we get the worst of it both ways. Our trees are sold far below value and the furniture and other articles made from them are brought back to us with freight and three or four profits added."

The News says wisely. The destruction of valuable timber solely for the sake of getting at the rich virgin soil the forests have helped to make, is a wanton waste for which, in the older States, there is seldom justification. In too many instances it is done by land-owners whose broad fields have been stripped by years of cropping of all the elements of plant food, and they, rather than to use fertilizers, girdle their trees, that would some day be of much more value than their land now is, and as they fall they burn them, and so ultimately their land is cleared. It is a squandering of natural wealth to which Americans are especially prone, and for which they will be condemned by their posterity, if they do not have reason to regret it before they die, as many in Pennsylvania and the Ohio Valley States have been doing for years.

There is another feature of this subject that should receive attention from the Southern press. Very much of the timber sold by stumpage is parted with greatly below what it should be, because the land-owners have no conception of its real value. In 1882 many timber buyers went into the trans-montane counties below Asheville, N. C., and began to purchase all the black walnut trees they could find at from 50 cents to \$1.50 per tree. The people were delighted at the sudden inflow of money. An editor of one of the Asheville papers, Col. Deake, suspecting that

the strangers had "struck a bonanza," sent to Chicago for quotations of black walnut, and when he received them he discovered that the buyers were getting an average of \$50 for every one they expended. He instantly published the facts, which were rapidly carried to the mountaineers, who afterwards got prices somewhat nearer the actual value of their trees.

While the demand for lumber increases every year, the area of forests is steadily reduced, and in the same proportion their cash value is enhanced. It is, therefore, a wanton waste to destroy any forests unnecessarily, and it is poor economy to sell standing timber at the low prices speculators generally offer for them.

POULTRY raising is an industry of great and rapidly growing importance. The demand for fowls and eggs increases so much faster than the domestic supply that we have to import both from other countries for the American markets. Last year we obtained from Canada alone the enormous number of 13,682,914 dozen eggs, representing the entire product of more than 500,000 hens. The number received from Europe was much in excess of this astonishing figure. While in all parts of the country poultry raising may be made profitable, there is no one section in which this business can be pursued to the same advantage as in the South, and yet there are but few in any of the States that have given it special attention. The farmers usually endeavor to have enough for home consumption, and, because fowls thrive fairly well without care and do their own foraging, nearly all have a surplus that goes to the country store, and the aggregates thus collected are sent to the cities or to the health and pleasure resorts. All who have traveled much in the South have seen the flat baskets, with woven wire covers, filled with chickens at the railroad stations awaiting transportation, and get an idea that the market is abundantly supplied, but they are mistaken. It often happens that there is an insufficient stock in the cities, and dealers have to wire their correspondents to hurry forward what they have on hand. Of late a considerable demand has arisen at the North, which has long been a heavy purchaser of Southern eggs, for its chickens also, and this will be sure to increase until a decided advance in prices is caused by it, or else a very great addition to the number of fowls raised. The mild winters, the abundance of natural food, the low price of land and of labor in the South, all contribute advantages for the prosecution of this industry on a much larger scale than it is now carried on in some of the Northern States. We know of no business in which women, children and men of small means can engage in the South with such reasonable certainty of receiving handsome profits for their money, time and work. Northern farmers going to the South to settle will find this one of the profitable occupations in which to engage, for the demand for fowls and eggs is unlimited, and all the transportation lines give low rates for this class of freight and do their best to get it to market in good condition.

### "Pull Altogether."

"In union there is strength." The ancient philosopher taught this to his boys when he gave them a bundle of rods to break, and none of them could do it. Then he cut the withes that bound the bundle and told them to try them singly. In a moment all were destroyed. It is the same with communities, with States, and with nations. "A long pull, a strong pull and a pull altogether" lifts the anchor from the sea and enables the ship to pursue its course. "A pull altogether" helps weak communities to gain what stronger ones, if divided, never could get. We are led to say this because of a disposition in some quarters to make the misfortunes of certain communities an occasion for advancing the interests of others. This ought not to be. We were glad therefore to read in an esteemed journal, the Montgomery (Ala.) Daily Advertiser, the following editorial:

The cruellest thing yet is the persistent circulation of the rumor that the Louisville & Nashville Railroad is going to abandon its new shops at Decatur and put them somewhere else; that the fever has permanently scared the road off, and that now is the time for other cities to begin to bid. Isn't Decatur hurt badly enough without this, for which there is not the slightest foundation? The road is not only under contract to build there, but the contract is made fast by such valuable considerations as 50 acres of land and \$100,000 in money, the majority of which has been paid. The buildings, an enormous plant, are erected and about ready for the machinery.

But that is not all. The Louisville & Nashville road, least of all the corporations in America, could afford to condemn any city on its line because it was unfortunate enough to have an attack of yellow fever. To abandon Decatur would be equivalent to telling the world "keep away from two-thirds of the cities on my line, for they are liable to yellow fever." In other words, to condemn Decatur would be to condemn every city on its line south of Nashville. The Louisville & Nashville people are not fools. On the contrary, they are developers of the wisest sort, who build, but never tear down. So far from abandoning Decatur, they will do more than ever to help her out of her trouble, and prove to the world that because the territory covered by their lines is liable to yellow fever, yet this same fever is not the drawback and death-dealer imagination paints it. Twelve months from now Decatur will be stronger than ever, just as Memphis and Montgomery and Pensacola and Mobile and New Orleans have in times past risen superior to a back-set that in its nature is peculiarly temporary. Decatur will sewer and wash herself, and, learning from experience, will keep herself clean of both filth and yellow fever. It is not only ridiculous but cruel for any city whatever south of the Ohio river to jump on another on account of yellow fever. Least of all, could a railroad afford it?

The foregoing is not only admirably put, but it illustrates the spirit that ought to prevail throughout the South. The MANUFACTURERS' RECORD believes in a generous rivalry. It is the very life and incentive to progress. But it also believes that solid advancement must come from a cordial and complete unanimity. The prosperity of Decatur is essential to that of every other Southern city. All our communities are linked together in such intimate connections

that the success of one is to the advantage of all, while an injury to one hurts all. Every organized American community is but a part (more or less conspicuous) of that great body politic, the United States, and while the effects of disasters and calamities lessen in proportion to the distance from the places where they occur, yet they are felt in all parts of the land. There is but one rule for Americans to observe, and that is to 'pull altogether,' and in no part of our grand domain should this law be so closely adhered to as in the South, for its States and lesser communities are emphatically (but not in a political sense) the anti-types of that fabled bundle of rods. Standing together they cannot be broken. United in those convenient subdivisions that make the States, and through the States to the aggregated units that make this proud and prosperous nation, they will continually prosper if their people will continue to "pull altogether."

### How to Keep the South Poor.

The Richmond State falls into line with the Constitution in its appeal to Southern people to patronize home industries.

Our contemporary does not hesitate to say that the practice is too prevalent in Richmond of sending to distant cities for articles which are made at home. Richmond people, when they want household furniture, dress goods and various things of use and ornament, send off to New York to purchase them, notwithstanding the fact that all this merchandise can be obtained at the same prices at home.

To some extent our merchants and manufacturers are to blame for this state of affairs. Many of them do not let the public know what they have, the quality of their goods and their price. In a word, they do not advertise judiciously. But customers are somewhat to blame themselves. Our contemporary says of the Richmond people:

"Another and large class of Richmond buyers is that which buys dry goods and notions by mail. This class affords the big New York house its extreme felicity. It buys goods in value from 5 cents to \$50, and is caught by the broadside advertisements in the Gotham papers, giving prices, and closing with the alluring catch-phrase, 'orders by mail a specialty.' This is a favorite method by means of which New York dealers unload a great quantity of out-of-date or shop-worn goods.

We take this opportunity to inform the guileless lady purchasers of Richmond that the big New York houses ought not to delude them by any such phrase as 'we buy in large quantities and can afford to sell cheaper.' Can the New York establishment whose house rent is \$12,000 a year sell for less than the Richmond merchant whose rent is \$1,200 a year? And again: The New York merchant, if he has any sense, will know six months before hand just what style of goods a manufacturer will turn out the next year. That style may be very different from the prevailing style, and any goods on his shelves when the next style arrives will be a loss. Hence, his only hope is to offer 'promptly by mail.'

This applies to Atlanta and other Southern cities. Many ladies and gentlemen in Atlanta make it a point to order their wearing apparel from New York. They buy almost everything there, from a stove to a suit of parlor furniture. Yet, if they but knew it, they could buy identically the same things here and save money. Atlanta manufacturers and merchants can afford to undersell their Northern competitors, because they pay less here for rent, labor, and in the shape of taxes and other expenses.

It is useless to urge the patronage of our local dealers from considerations of patriotism and friendship, but the appeal ought to have some effect when people can be made to see that they can save money, keep it here at home and make this entire region prosperous. This is the way to put it. We can keep the South poor by sending our money North; we can make her rich by simply keeping our money here and trading with each other.—Constitution, Atlanta, Ga.



## LOUISVILLE.

## Her Great Record in Railroad Building—Many New Enterprises Being Established, &amp;c.

BRANCH OFFICE MANUFACTURERS' RECORD,  
LOUISVILLE, KY., October 30, 1888.

Louisville is making arrangements to celebrate the opening of her second new railway line completed this year. The Louisville Southern, giving the city a third competing line to the South, was opened in June, and the Louisville, St. Louis & Texas, which traverses the most fertile tier of counties in the western part of the State and parallels the Ohio river, will be opened for business about the 20th of November. This road, which is about 150 miles in length, is thought to be a part of the line constructing to give the Vanderbilt system a Southwestern outlet, and the only link remaining to be completed is the line from Louisville to Dayton, Ohio, by way of Cincinnati. No city in the United States can exhibit such a record of railroad building as Louisville has shown since 1880. The Louisville, St. Louis & Texas will make the eighth complete line that has been built in that time, or a steady record of one new railroad a year. It is the concentration of these interests, the establishment of their shops and the innumerable opportunities of occupation which they create that made the population of Louisville increase from 123,000 in 1880 to nearly 225,000 in 1888, and the growth during the last year has, perhaps, been more marked than during any other year. The Louisville, St. Louis & Texas Railroad will traverse the natural gas fields in Meade county from east to west throughout the entire length, and will, besides, touch upon vast deposits of building stone, fire-clay and valuable canal coal beds, not to speak of large forests of fine timber. The counties traversed by the roads pay about one-fifth of all the taxes in the State, and contain nearly an equal proportion of the population. Yet, singular to relate, some of these counties have never before been penetrated by a railroad, and none of them are in direct rail communication with Louisville. On the other hand, they have been directly connected with Chicago and St. Louis, and therefore the bulk of the trade of a very rich and productive section has heretofore gone out of the State. There is no question now that it will soon be turned in the direction of Louisville, and will give a tremendous impetus to the business of the city, which has already been growing so enormously. The line will connect at Henderson with the Ohio Valley & Southwestern Railroad, giving the city of Louisville a fourth competing line to certain sections of the South, and especially another line of direct communication with the trade of Arkansas and Texas, which has been growing in bulk and value for the past eight years. Permission has already been obtained from Congress to allow the Northern continuation of this road to Dayton, Ohio, to construct a new bridge across the Ohio river at this point. The structure will cost about \$2,000,000, and will be the finest bridge on the Ohio. It will connect Louisville directly with Jeffersonville, and will add immensely to the values of properties in the eastern end of the city.

The success of the Swiss and German colonies in the mountain sections of Kentucky (some half a dozen of which have been founded in the past three or four years) has attracted the attention of immigrants, and is resulting in the establishment of similar communities. Mr. Henry Lemcke, who has been interested in foreign immigration to this country for a number of years, has just established a new colony, to which he has given the name of "Hannover," near Franklin, in Simpson county, Kentucky. It is situated on the line of the Louisville & Nashville Railroad, and he has already received

many letters from German-American farmers in California, Wisconsin, Michigan, Illinois, and generally throughout the Northwest, who want to come and settle in this State. During the past winter and spring all the information offices in Kentucky were flooded with letters from people in the Northwest who were seeking to come South and escape the rigors of the climate in that inhospitable region. Many families have moved hither as a result of the correspondence thus opened, and it only remained for some enterprising person to take advantage of the opportunity presented to settle a large population permanently in the State. Recently a number of letters have come from Kansas, where the successive failures of crops and the enormous burdens of mortgages have had a very discouraging effect upon those who went to that State in search of fortune. And a great many have returned from California, who flocked to that State during the continuance of the impossible boom which swallowed up so many little fortunes, invested by people who imagined that there would be no end to the prices to which property could mount. The extraordinary railroad development in this State and the steady and healthy increase of land values throughout the region has had the effect of showing people that fortunes were waiting to be made a great deal nearer home and with a great deal more certainty.

The approach of the winter season has not had the least effect upon building operations in Louisville. Every skilled workman in the city is busily employed, and fine buildings are going up in every quarter. An Eastern syndicate, with \$1,000,000 to invest in the purchase and improvement of property, is now in negotiation with architects looking to the erection of business and residence structures. The building committee of the Commercial Club, who are charged with the erection of a \$350,000 home for the club, have advertised for competitive offers for sites, and will make their choice early in November. Their plans have been enlarged by the applications for quarters, and the office building will probably be nine or ten stories in height and 100 feet square. It will be supplied with every modern convenience, will be fire-proof throughout, and contain a hall for the club meetings and offices for the transaction of the club's business. The project of erecting a music hall that will cost about \$500,000 is well under way, and is now in the hands of an intelligent and active committee. The Kentucky Polytechnic Society, who own the largest library in the South and an extremely valuable collection of curios and art specimens, have indicated their desire to merge their entire property in the project, in which event the enterprise will be an extensive one, covering three or four very important interests, and will furnish Louisville a great auditorium to compare with any in the country.

The city council have ordered a vote to be taken next month upon the question of issuing a million and a half of bonds for the construction of new streets and sewers. The great increase in population and business has made new streets in the business center a vital necessity, and there will be very few if any votes against the proposition. It is the intention to construct the new streets with granite and asphalt, and when they are completed the city will be splendidly equipped for the great commercial struggle that she is making so successfully. It is also the intention of the city

authorities next spring to submit a proposition for the founding of a series of parks which will add greatly to the attractiveness of Louisville. There will be no opposition to any of these projects.

One of the most important facts in connection with the opening of the Louisville, St. Louis & Texas Railway is that it will bring Louisville within 90 miles of a fine coal field. This is nearer to the city than any other deposit of coal now reached by the market, and it is highly gratifying to the community to know that it will tend to prevent "squeezes" in coal such as have occasionally been engineered in the past through the failure of supplies from Pittsburgh. The coal field on the line of the railroad comprises not only the ordinary bituminous coal, but a great deposit of canal coal, much of which is now being shipped to Europe, and which will, of course, come at once into this market for consumption for domestic purposes. Among the other features of the country through which the road runs and those tributary to it may be mentioned that there is produced annually over 30,000,000 pounds of tobacco, 9,000,000 bushels of corn, with other products in proportion. Seventy tobacco factories are on its very line, half as many distilleries, while many cotton mills and other manufactories make the country an excellent railroad country. The timber along the line is of the best quality. Cement rock, oolite, brown and building stone are found in the greatest quantity and finest quality. The brownstone was awarded the highest medal at the Philadelphia Centennial in 1876.

President F. D. Carley, of the Kentucky Union Land Co., returned recently from New York, whither he has been attending to important interests of his company. He was very much pleased at the interest which is being taken by Eastern capitalists in Southeastern Kentucky, and said that on the day before he left New York the president of one of the largest national banks in that city made the statement to him that the representative of an English syndicate with \$10,000,000 capital was on the ocean en route to this country looking up investments for his syndicate. The bank president in question added that he did not know of any locality where he thought he could as safely advise his English correspondent to invest as Southeastern Kentucky. Mr. Carley said that trains on the Kentucky Union will be running into Breathitt county from Lexington next spring and summer. "We are particularly occupied at present," said he, "in plans for the development of the lands of the Kentucky Union Land Co. The bonds on the railroad do not cover the lands that belong to the land company, which is a separate and independent organization. The most valuable lands along the line of the new road are owned by the land company. Locations for mining and manufacturing sites; extensive acreage for farms; three hundred thousand acres of hardwood forests, with saw mills already in operation; canal coal beds, which Professor Eggleston, Professor Procter and Professor Shaler pronounced the richest canal coal deposits in the United States; coking coal beds better in quality and extent than the Connelville coke and nearer the large markets; the Red river furnace, with all the elements of future iron industries. These are the problems with which the land company is now dealing. We intend to be in readiness to push the development of all these industrial opportunities as soon as the railway is completed to Breathitt county. At the rate at which the public is becoming interested in the land syndicate, there is every reason to expect an unqualified success in that direction."

The fact that the Louisville & Nashville Railroad and the Norfolk & Western Railroad are building extensions to tap this region on its southern border, while the Kentucky

Union Railway is penetrating it from the north, is adding a great deal of value to the land company's half million acres of land, and it is the knowledge of this railroad construction which is giving activity to the projects of the land company. The stock of the land company is owned by those who are building the road and a number of citizens of Louisville who first found out the value and purchased the lands while they were very cheap. There is a small portion of stock set aside by agreement for increasing the working capital of the company, and this has lately been placed in the hands of the president to be disposed of, in order that the practical development of the lands may keep pace with the building of the railway. Mr. Carley intends to remain in Louisville until next spring, pushing the company's interests, and by that time there is little doubt that Southeastern Kentucky will be all alive with investors.

From advanced sheets of the report of State Inspector of Mines Norwood, it is learned that the output of commercial coal in Kentucky for the six months ending June 30 (commercial coal being that mined at large mines and finding a market at a distance) was as follows:

District.	No. of Mines.	Output in bushels.
Western.....	32	17,038,648
Northeastern.....	10	4,579,601
Southeastern.....	23	9,347,040
Total.....	65	30,965,289

There are mines near towns in the State which consume all the product of such mines, and these Mr. Norwood will hereafter designate as "locally important mines," and separate them in his report from the "commercial mines," or those which sell in large markets. Were these "locally important mines" included in the statement above, the number of mines would be 89, and the total product 31,091,189 bushels. This is a very large increase in the output for the preceding six months, but just how much is permanent Mr. Norwood cannot yet undertake to state. As a comparison, though, the product for the entire calendar year of 1887 was only 48,329,630 bushels—only a little upward of 17,000,000 bushels more than for the first six months of the present year.

The product for the next six months ending December 31, 1888, will probably equal the six months preceding, as sixteen new commercial mines are now in operation. Eleven of these are entirely in addition to the list of 1887, while five are distinctly new works. Knox, Webster and Johnson counties, for the first time, enter the list of producers of commercial coal, while Bell county is for the first time reported in the general list. In addition to bituminous coal, Kentucky is just beginning to open up her great supply of canal coal to the world. The mines in Hancock county have been producing canal coal to a small extent for years, but lately these mines, and new ones in Johnson and Carter, are considerably increasing the output, which was as follows for the six months ending June 30:

Counties.	Tons Canal Coal.
Hancock.....	16,000
Johnson.....	180,000
Carter.....	610
Total.....	196,610

Johnson county has immense canal fields and will likely show a very great production for the next six months. Two of the mines in this county were only placed in condition to do effective work thirty days before the close of Mr. Norwood's report.

Of this total output there were 10,384,934 bushels of bituminous and 95,075 tons of canal coal shipped to points outside the State, leaving 20,706,355 bushels of bituminous and 101,535 tons of canal coal for home consumption. The value of Kentucky's bituminous coal product is shown in the report as follows:

District Mines.	Value in Millions.
Western.....	\$29,307
Northeastern.....	2,045
Southeastern.....	372,777
Total.....	\$324,129



Another cement mill is shortly to be added to the eight establishments that are manufacturing from the cement rock in the vicinity of Louisville. The growth of this trade here is something remarkable, and it all seems to have accumulated since 1880. In that year 382,119 barrels were manufactured, against 320,150 barrels in 1870, showing that the trade had remained about stationary during that period. In 1881 the capacity of the mills was almost doubled, and the amount produced was 627,741 barrels, and the record since has been as follows:

	Barrels.
1882.....	708,598
1883.....	863,822
1884.....	836,794
1885.....	773,112
1886.....	925,210
1887.....	1,189,110

The Western Cement Association, which is the selling agent of the mills at Louisville, reports that the sales of the current year will be about the same as last year, the Presidential election having as usual had the effect of causing people to neglect their business for politics. The K. & I. Cement Mills Co. is making arrangements to double its capacity.

The woolen mill business in Louisville will be increased shortly by the establishment here of another mill already in successful operation in a Western town. The firm which is thinking of moving here has been doing a large business for years, but the increase has been so rapid that it has reached a point where it cannot be accommodated by the facilities for shipment and for the receiving of supplies obtainable at their present location. The mill has also attached to it a department for the manufacture of the product into jeans clothing, and the union of the two industries is said to have been remarkably profitable. The newcomers expect to largely increase their stock if they remove here, and it will be offered for local subscription. Statements of their business are to be made, and if they correspond with verbal statements already made, the stock will be gobbled up before one could say "Jack Robinson." This is one of the steps toward the centralization of the jeans business in Louisville, and it is interesting to observe how it has grown here during the past eight years. In 1880 there were but four mills in the city, and they were working then upon a capital of not more than \$425,000, employing 360 hands and producing goods valued at \$569,079. In 1888 there are four mills engaged in manufacturing jeans alone, and three mills occupied in the manufacture of other woolen goods, the whole seven employing about 1,800 persons, and producing goods valued at between \$2,500,000 and \$3,000,000 per annum. The amount of capital invested is over \$1,000,000. It will be seen that the value of the product has quadrupled, while the capital involved has little more than doubled, which shows that the expense of operation has been largely reduced, and that the goods have been cheapened in proportion.

The manufacture of agricultural implements in Louisville has also been growing very rapidly since 1880, and the amount of the product has been increased since that year from 30 to 50 per cent. The value of all these products in 1880 was \$1,500,000, while the value in 1887 was about \$2,500,000. There were over 200,000 plows manufactured in Louisville in 1887, without considering the enormous numbers of new "points" that were necessarily manufactured for repairs. The manufacture of this class of goods increased largely, in spite of the fact that the plow-makers of Louisville have since 1880 withdrawn entirely from the Western and Northwestern territory, and have confined themselves almost exclusively to the South and a few foreign markets. The plow business was never more active than it was during the year which closed last spring, and the probability is that its increase during the next four or five years will largely discount all the growth that it has heretofore shown.

A well-known and prominent railroad official, the president of a road running into this city, made a statement a few days ago which illustrates with startling emphasis the rapid and remarkable development and increase of the value of property in Eastern and Southeastern Kentucky. In 1879, he stated, he was sent to that section as an expert by a syndicate of capitalists to investigate and report upon the opportunities there offered for profitable investment. After a careful and deliberate study of the country he advised the syndicate to invest \$100,000 in the country visited. Land could then be purchased in the section in which he advised the investment for twenty-five cents an acre. The capitalists, after due consideration, decided not to place their money as advised. If the investment had been made, the gentleman stated, and a moderate amount spent in developing the country—and he said it would have required very little money to develop it sufficiently to have attracted the attention of prospective investors—the fortune of the syndicate would have been made. To day, the property of which he advised the purchase is worth \$10,000,000, and constantly increasing in value.

#### NOTES OF PROGRESS

A cablegram was received here from London several days ago asking advice as to the propriety of paying \$675,000 in cash for 15,000 acres of coal lands in the valley of the Elkhorn in Southeastern Kentucky.

Pineville has recently organized a commercial club with a membership of nearly one hundred, and will enter the State Commercial League. Gov. Buckner is the president of the League, which is being formed to thoroughly develop the industrial possibilities of Kentucky. It will include the commercial clubs of all the principal towns in the State.

Southeastern Kentucky will be rolling in wealth now. The first log "tide" in eighteen months has just come down the rivers, carrying millions of feet of timber to market and opening up one of the principal sources of money-making in that section.

The Louisville Cotton Mill has increased its capital \$50,000, all the amount being taken by the first stockholders, save about \$10,000. The company is trying with all its might to start operations on December 1st. The mill will be running by January 1st at latest, and it is understood that it has already sold all the product it can turn out next year. It is predicted that the mill will be doubled in less than three years. The Henderson Mills at Henderson are making preparations to double capacity next spring.

The increase in taxable value of real estate in Louisville since 1880 is over \$20,000,000. This omits the value of railroad properties.

George E. Knowles, of Trenton, N. J., will build at once at Sheffield, Ala., a knitting factory to employ about 200 hands and with a capacity daily of 600 dozen hose. A site was donated by the Sheffield Land, Iron & Coal Co. A yarn mill will probably be established by other parties, to run in connection with the factory.

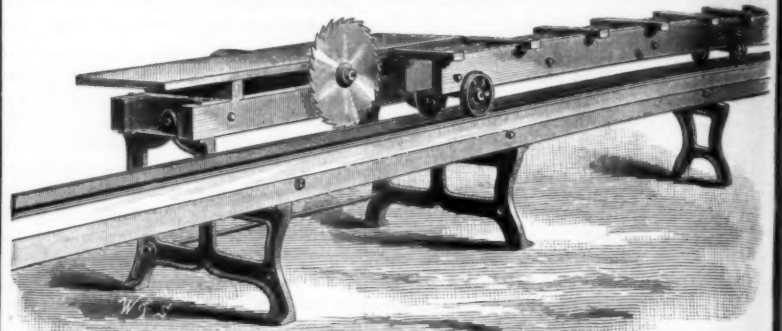
THE vestibule train of Pullman cars which last winter was run between New York and Florida, is reported to be put on again on January 6. Three trips a week are to be made.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

#### Hand-Feed Single Saw Edger.

The annexed cut represents a new hand-feed single saw edger, which was recently gotten up by the Kingsland & Douglas Manufacturing Co., of St. Louis, Mo., to meet the demand for a cheap and yet first-class machine for edging lumber in mills where

and remains in any desired position. No extra tools are needed for adjustment, and they can be easily cleaned out, there being plenty of room for that purpose. Sample cups sent out for inspection and trial when desired. For further particulars address Pedrick & Ayer, 1025 Hamilton street, Philadelphia, Pa.



HAND-FEED SINGLE SAW EDGER.

the use of a gang edger is not required. The edger is provided with iron legs and is made in a substantial manner, and the finish and the material is the same as characterizes their machinery. Send for illustrated catalogue, which will be mailed free of charge on application.

#### Patent Oil Cup.

This is the invention of a practical railroad man, and is an oil cup that does not require a handful of tools to regulate. The cuts give a good idea of their appearance and construction. Fig. 1 is a rod oiler, the top of which screws on, or can be made to slip on and be held by a spring catch. Fig. 2 is a guide oiler, the cover of which extends to the point marked "X" in cut; it has a small vent hole in the top to admit the air to facilitate feeding the oil, and also to allow it to be taken off readily. Fig. 3 is a section view of the rod cup, showing the internal arrangement; this is the same in all the cups. The bracket-shaped piece in interior of cup is split open; it is wedged apart at the time that the screw is cut, so that it always, even after long use, clamps the spindle and holds it in any desired position without the aid of jamb nuts or binding screws. Around the edge of the cup, marked "a,"

#### Goulds Improved Hydraulic Rams.

This hydraulic ram, manufactured by the Goulds Manufacturing Co., Seneca Falls, N. Y., represents a most efficient and automatic labor-saving device for raising water any distance where a sufficient supply and head are attainable, and the slight expense for first outlay and maintenance considered render them most desirable for supplying running water in any quantity to dwellings, factories, railroad stations, stock-yards, etc. With an experience of 35 years in their manufacture, and a practical knowledge of the requirements necessary for their successful operation, this company are able to offer one of the most perfect and efficient rams in the market. The castings are all heavy in pattern and of proportionate strength. The air chambers are larger than those of any other ram, thus relieving it of all undue strain and aiding its working, while the valve stem and case (made of best bronze metal) are of a new and improved design calculated to develop the greatest possible efficiency.

The accompanying cut represents one of their improved hydraulic rams in operation, furnishing water for house, fountain, barns, etc. A few words will explain it.

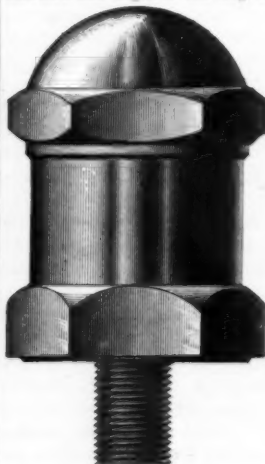


FIG. 1.

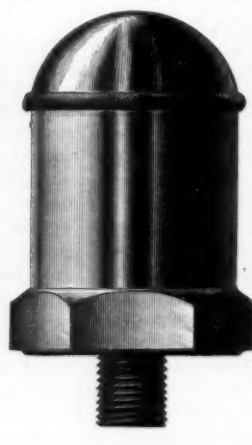


FIG. 2.

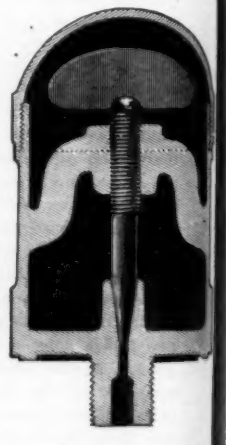


FIG. 3.

there are marks by which the engineer can adjust the opening to feed the required amount, according to the temperature of the weather and the quality of oil used; when the engine is out of use it is only necessary to screw down the spindle and the flow of oil entirely stops. The oilers are made in two sizes. A cup similar to the guide cup for locomotive truck brasses is also made. These oil cups are in very extensive use by the Northern Pacific and the Philadelphia & Reading Railroad Companies and have given entire satisfaction, it is said. The spindle is easily manipulated

The water is taken from the supply at the left through the drive pipe—the length and fall of same to be determined by results required—and forced upwards through the discharge pipe to the point of delivery.

These rams will work, and successfully, where the spring or brook is only 18 inches higher than the ram; yet, as the height or head increases, the more powerful the ram operates, and its ability to force water to a greater elevation and distance correspondingly strengthens.

Thus, as shown in the table of tests,



they have a varying head of 10 to 25 feet, proportioned to height water is to be raised and quantity required. As a specific example, we might say a fall of 10 feet from the brook or spring to the ram is sufficient to raise water to any point, say 150 feet above the machine, while the same amount of fall would also raise water to a point considerably higher, though the quantity of water discharged will be pro-

discharged at an elevation five times as high as the fall, or one-fourteenth part can be raised and discharged, say ten times as high as the fall or height of drive pipe.

Thus, with a fall of five feet for every seven gallons drawn from the fountain, one may be raised twenty five feet, or half a gallon fifty feet, or with ten feet fall, one gallon of every fourteen may be raised to the height of 100 feet, and so in proportion

### Heavy Planer and Smoother.

The demand for something better in the way of a hardwood planer and smoother than has heretofore been produced has resulted in presenting to our readers the machine shown in the accompanying engraving, and we can assure wood-workers who have been looking for a machine capable of doing extra fine work that they will

geared feed rolls six inches in diameter, making a feed that can be relied upon as being first-class in every particular.

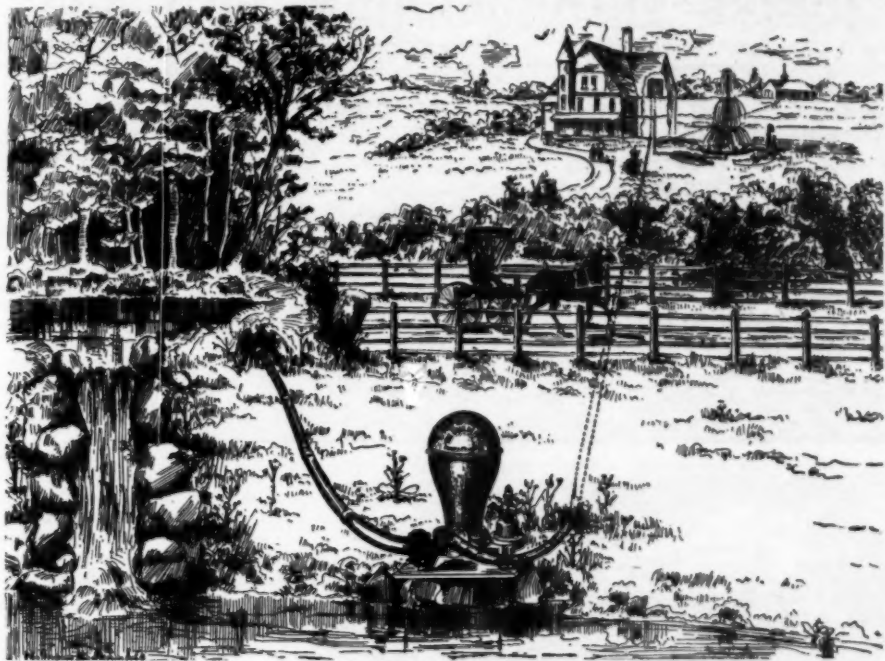
The feed rolls are weighted on an improved principle, the weights being adjustable to give more or less pressure as desired. There are two speeds to the feed, and we can assure wood-workers that this machine will do smoother work at its fastest speed than has heretofore been attained on any other smoothing planer at a much slower speed.

The cylinder is four-sided, so as to use either two or four knives, as may be desired. It is double belted, and the feed is run directly from it. There are pressure bars on each side of the cylinder, arranged on a new principle, and work to the circle of the head, thus preventing all tearing out of wavy grained or knotty stuff, either narrow or wide, or clipping of ends, which is so common with many smoothing planers.

The builders make machines on this style 24, 26, 28, 30 and 36 inches wide. The cut shows our 30 inch machine, and each size is built in proportion.

One of the greatest advantages of this machine, specially in the wide sizes, is that the stock can be run diagonally under the cylinder, which is far better than running a cylinder in a diagonal position, as it permits straight belts being run to the cylinder, and the planing of short stuff. It is specially adapted for planing framed stock where straight and cross-grained wood is built up, and which heretofore has given furniture manufacturers any amount of trouble on account of their not being able to plane this particular kind of work. That it will do this kind of work perfect is sufficient to recommend it to the trade.

Furniture manufacturers who have wide hardwood table tops or other glued-up work to plane, and who have not found heretofore a tool to do the work satisfactorily, will be more than pleased with the work done on this machine, and will be astonished at the rate it will do it. For planing mills, wagon and carriage factories, it will be found a valuable acquisition, and for piano and organ work, which necessarily must be perfectly smooth, it has no superior, and no better tool can be



IMPROVED HYDRAULIC RAM.

portionately diminished as the height and distance increase.

Again, when the requisite quantity of water is forthcoming from the ram, operating under a certain fall, it is not judicious to increase this, for by so doing the strain on the machine is augmented, those parts doing the labor are overtaxed, and the durability of the ram lessened.

Practical experience and experiments have proven that the best results are obtained where there is ample, though not excessive, length as well as fall to the drive pipe, for the weight of this volume of water is an important auxiliary in forcing water into the air chamber and through the delivery pipe.

Drive pipes are recommended to be 50 to 75 feet in length, though in very heavy lifts this may be advantageously increased to 125 and even 200 feet. In cases where this is not practicable the pipe may be bent in a coil five or six feet in diameter.

The quantity of water furnished a ram, or amount requisite to operate it, is determined by the size and fall of head or drive pipe, which quantity could be obtained by referring to the tables in their catalogue. Where the supply of water is limited there is no simpler or better plan of determining this quantity than to measure in pails or barrels the number of gallons which can be led in pipes from the spring or brook per minute or in any given length of time.

The relative height of the spring or supply above the ram, and the elevation to which it is required to raise, determine the relative proportion between the water raised and wasted—the quantity raised varying according to the height it is conveyed with a given fall; also, the distance the water has to be conducted, and consequent length of pipes, have some influence on the quantity delivered at the point of discharge, as the more extended the pipes through which the water has to be forced by the ram, the more friction there is to be overcome.

For ordinary purposes it is sufficient to say that in conveying water, say 50 or 60 rods, it may be safely calculated that one-seventh of the water can be raised and

as the fall or height is varied.

Rams should always be secured to heavy timbers or masonry and not be dependent merely upon pipe connections. This is important, as there is a constant concussion and strain upon the ram.

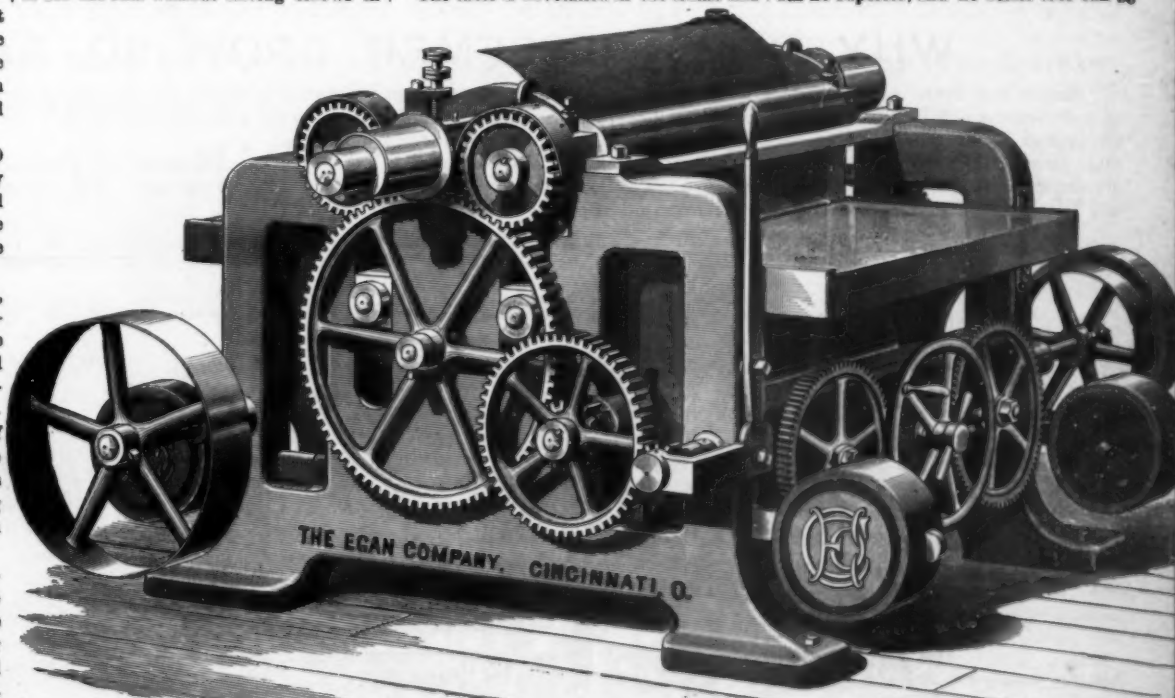
The ram and pipe should also be carefully protected against frost, and turns in either drive or discharge pipe should be avoided if possible. When it is impossible to set the ram without having elbows in

not be disappointed in the performance of this planer.

It is constructed on an improved principle and in such a manner as to combine strength and solidity, two great factors which tend to make a perfect smoother.

The frame is entirely cored and very substantially braced, making a very stiff and suitable frame for a machine of this class.

The table is dovetailed in the frame and



HEAVY PLANER AND SMOOTHER.

the pipes, make the elbows as large as may be, so as to place as little obstruction to the free and easy flow of water as is practicable.

For fuller information address the manufacturers, requesting catalogue, from which may be had many points of interest and value.

Subscribe to the MANUFACTURERS' RECORD.

raises and lowers on long inclines by means of two screws operated by a hand-wheel convenient to the operator. This means of adjusting the bed is claimed to be the best known, as it makes the bed absolutely solid and free from vibration, as the bed has more support beneath it than can be obtained in any other way.

The feed consists of four powerfully

found to prepare work for a sander, while its great capacity fits it for general planing.

This machine has recently been awarded the medal at the Centennial Exposition, Cincinnati, Ohio, because of the very excellent work done by it, and by communicating with the makers some valuable points can be obtained as to the special features of that award. Address the Egan Co., 298 to 348 West Front street, Cincinnati, Ohio.

# BESSEMER, ALA.

## WHERE IS BESSEMER?

Located according to its latitude and longitude, Bessemer is in 33 deg. 20' North latitude and 87 deg. West longitude from Greenwich. Its position in the State of Alabama is just above its center and about midway between its eastern and western boundaries. Its position in the Southern States is a noticeably central one. It is midway between Montgomery and Decatur, between Meridian and Chattanooga, Mobile and Nashville, Savannah and Memphis, New Orleans and Louisville, all of which will readily appear from the map published herewith. So far as its geographical location is concerned it could not well be more central, more on the lines of communication and transportation between the leading and principal commercial and manufacturing centers in the South. It has lines of railway leading direct to Texas, via Vicksburg and Shreveport and via New Orleans; to Gulf ports, directly to New Orleans, to Mobile and to Pensacola; to all of the Atlantic ports and to the North, Northwest and West. No city of its age was ever so favored with so admirable, comprehensive and extensive a system of railway transportation.

On the 12th of April, 1887, the first lot was sold in Bessemer; on the 15th of the following September the place was incorporated as a city, having then a population of 1,500 people. At this time, 1st September, 1888, it has a population of 3,500. It has over 400 different structures, some of them business blocks that would highly credit a city of a hundred thousand population. Over two million dollars so far have been invested in improvements. It has completed the largest rolling mill plant in the South, and two of the largest



## THE RAILWAYS OF BESSEMER.

In an area of four blocks, nine lines of railways center:

- The Alabama Great Southern R. R.
- The Louisville & Nashville Min'l Lias.
- The Bessemer & Huntsville R. R.
- The Georgia Pacific R. R.
- The Kansas City, Memphis & Bessemer R. R.
- The Bessemer & Tuscaloosa R. R.
- The Bessemer Dummy Line (standard gauge).

All of these lines are running to Bessemer. The Bessemer & Huntsville is completed as far as Village Springs, forty miles on the way up Murphree's Valley, with its ultimate terminal point at Huntsville. It is being rapidly extended.

The Bessemer & Tuscaloosa is completed to Woodstock, a distance of thirty miles, lacking only eighteen miles of reaching Tuscaloosa. At Woodstock this line connects with the Blocton Coal Mines Railway.

The lines of the Bessemer, Selma & Pensacola R. R. and Mobile & Bessemer R. R., now under contract and in process of construction, both center in this area.

The Sheffield & Bessemer R. R. is projected to Bessemer. It is now built as far as Jasper, forty miles northwest of Bessemer.



MONTZUMA HOTEL, 194x150, OPENED NOV. 1, 1887.

iron furnaces, extensive foundry and machine shops and planing mills. Five more iron furnaces are under contract, three of them with foundations already being laid. An enormous furnace factory, machine shops and boiler works are being located, and will construct the five furnaces mentioned. An enormous fire brick, tile and terra cotta plant is being established; has already commenced the manufacture of fire brick and will regularly employ 200 hands.

## WHY DOES BESSEMER GROW SO RAPIDLY?

Because it presents opportunities for the investment of capital, the establishment of manufactories and industrial institutions and for labor, common and skilled, that are unusual and unrivalled. In Bessemer, pig iron is being made cheaper than at any other point in the United States. The iron ore, the coking coal and the limestone are almost within a stone's throw of the city. The site of Bessemer is superb, unusually attractive, unimpeachably healthy, with thorough drainage and first-class water

works. It is already a leading manufacturing point, and is destined to become one of the principal manufacturing centers in the South. Schools and Churches are already established.

The illustrations are of two structures already completed, one costing \$125,000 the other \$40,000. There are a large number of similar structures in Bessemer already completed.



CHARLESTON BLOCK, 300 FEET FRONTAGE, 2D. AVE., BET. 18TH AND 19TH STREETS.

ANY INFORMATION CONCERNING BESSEMER WILL BE PROMPTLY FURNISHED BY THE

## Bessemer Land & Improvement Company.

WM. BERNEY, President. H. M. McNUTT, Secretary.



# SHEFFIELD, ALA.

## The Iron Manufacturing Center of the South.

**A**T THE HEAD OF NAVIGATION, ON THE TENNESSEE RIVER, SHEFFIELD is the *natural outlet* for the mineral and manufacturing products of Alabama and neighboring States seeking a water route to points on the Ohio and Mississippi rivers, and to the Gulf of Mexico, as well as the best *distributing point* over Alabama, Eastern Mississippi and East Tennessee, South Carolina, Georgia and Florida for Northern and Western produce, groceries, provisions, machinery, &c. Three Railroads already completed and in operation, and several others assured. *Principal shops of Memphis & Charleston Railroad*, in which cars and locomotives are to be built, are under contract to be erected here. These will employ between *four hundred and five hundred mechanics*, and consequently, with their families, will make an increase in population of at least two thousand people. Shops of three other railroads are contracted to be located here, some of them being now under construction.

## FIVE COMPLETED BLAST FURNACES

Have a capacity of 700 tons pig iron per day. Experts do not hesitate to say that *iron can be manufactured more cheaply* at Sheffield than at Birmingham, and its *river transportation facilities* will enable Sheffield iron to reach the principal markets at a saving of from

**\$2.00 TO \$2.50 PER TON.**

The quality of the iron produced is pronounced by consumers to be the best from any furnace in the South. Stove Works, capacity fifty stoves per day, now in operation. A first-class daily newspaper is regularly issued. Furniture Factory, Bottling Works, Bakery, Dummy Street Railroad, a 40-inch Morse Cotton Compress, Electric Lights, Agricultural Implement Works, 3 Steam Brick Works, 2 Hand Brick Works, 2 Steam Wood-Working Establishments, Water Works, 2 Banks, a Savings Bank, and Steam Job Printing Office already in successful operation, 15-ton Ice Machine just completed and a five-story Hotel, with all modern appliances, now being erected. The Cleveland Hotel, Park House and numerous boarding houses furnish accommodations to travelers; Paint Works nearing completion. Other manufacturing establishments under consideration, among them a large Cotton Mill soon to be commenced.

**Good Water. Free Public Schools and Churches. Drainage Excellent.**  
HEALTH AND CLIMATE UNSURPASSED.

**Splendid Opening for Men of Push and Energy. No Better Point for Profitable Investment. No "OLD FOGY" Element Here.**

**SITES FOR MANUFACTURING ENTERPRISES,**  
**And for Free Public Schools and Churches**  
**Donated by Sheffield Land, Iron & Coal Company.**

Population January 1st, 1887, 700; August 21st, 1887, by actual count, 2,588. Increase of population, 800 per cent. in eight months, and only limited by accommodations. Present estimate (August, 1888) fully 3,500.

Three years ago the site of Sheffield was cultivated as corn and cotton plantations, and was without a railroad. Numerous two and three-story brick business houses, and one and two-story dwellings have been, and are being erected. The class of buildings will compare favorably with those in cities of 20,000 inhabitants.

**LIMESTONE** of excellent quality for *fluxing iron* in unlimited quantities at the furnaces' sites. First-class building stone and brick clay abundant. Rich and extensive deposits of *brown hematite iron ore* within twenty miles, along the lines of two Sheffield railroads, which, by actual results in the furnaces, yield above 50 per cent. metal. Iron of high grade is being made with a pound of coke to a pound of metal—a result never before accomplished with Southern ores and coke. The Sheffield & Birmingham Railroad runs through the heart of the *Warrior Coal Fields*, which abound in first-class *coking, steam, gas and grate coal*. Timber is abundant and cheap.

The *Memphis & Charleston Railroad*, *Sheffield & Birmingham Railroad* and *Nashville, Florence and Sheffield* branch of the *Louisville & Nashville Railroad* are now in operation into Sheffield. Surveys of three other railroads have been recently completed to Sheffield, which will soon be the *best combined river and railroad transportation center* in the South.

Every merchant and every established manufacturing enterprise is doing a profitable business. *More are needed.* For further information address

WM. L. CHAMBERS, Vice-President and Manager,

**SHEFFIELD LAND, IRON & COAL COMPANY, - - - SHEFFIELD, ALA.**

# ALABAMA'S GREAT MINERAL WEALTH

SURROUNDS THE

## ★ CITY OF TALLADEGA, ★

Which, according to statistics, is the **MOST HEALTHFUL CITY IN ALABAMA**, and the **County Seat of Talladega County.**

THE CITY HAS A POPULATION OF 6,000, AND ITS POPULATION IS RAPIDLY INCREASING.

**T**ALLADEGA is on the main line of the E. T. V. & G. Railroad, the A. & A. Railroad, and is the present terminus of the T. & C. Railroad. Work is rapidly progressing on the Birmingham & Savannah Air Line Road, between Birmingham and Savannah, and within twelve months this road will be completed via Talladega from Birmingham to Savannah, which will place Talladega on the direct line from Birmingham to deep water on the Atlantic, making

### TALLADEGA ONE OF THE BEST DISTRIBUTING POINTS IN THE STATE.

THE CITY HAS

### AN EXCELLENT SYSTEM OF COMMON GRADED SCHOOLS,

With a scholastic population of 500, and **THE MOST COMMODIOUS AND ATTRACTIVE PUBLIC SCHOOL BUILDING IN THE STATE.** The main building is a three-story brick, slate roof structure, well ventilated, heated by steam; has accommodations and seating capacity for 500 pupils. This school is owned and sustained by the city. All branches of English literature, foreign languages, music, the sciences and art, are taught for a nominal tuition. Among other educational institutions are the following:

**SYNODICAL FEMALE INSTITUTE,** Property valued at \$50,000.

**D. D. & B. INSTITUTE,** Property valued at \$150,000.

**BLIND INSTITUTE,** (in course of construction,) property valued at \$150,000.

**FOSTER COLLEGE,** property valued at \$150,000.

No other city in Alabama has so many educational institutions and so many public buildings.

### ← TALLADEGA HAS THE MOST COMPLETE SYSTEM OF WATER WORKS IN THE STATE. →

The stand pipe has a capacity of 175,000 gallons, and into this reservoir a supply of fresh, clear, pure water is pumped every day from a large spring located in the heart of the city, which discharges over 2,000,000 gallons per day. The gravity pressure from this system is 90 pounds to the square inch in the business portion of the city. The city has broad streets, well macadamized and shaded with beautiful trees, and is well lighted with a **SUPERIOR QUALITY OF GAS.** Sixty fire plugs and forty gas lamps protect against fire and illuminate the streets.

**A LARGE FURNACE PLANT** gives employment to thousands of hands, and makes a high grade of chilled car-wheel iron from ores, limestone and coal within ten minutes haul by rail, or an hour's haul by wagon. **FOUR LARGE LUMBER MILLS,** with an aggregate daily capacity of 200,000 feet of lumber, cut from the long-leaved yellow Pine of this country. **FOUR BRICK YARDS** are in active operation. **A SASH, DOOR and BLIND FACTORY,** a **FOUNDRY, MACHINE SHOP, FLOUR MILL, COTTON-SEED OIL MILL,** and various other industries are in successful operation, and the **TALLADEGA ICE CO.** cools the thrifty population with pure ice at 50 cents per hundred. Another large furnace plant will be completed within the next ten months. A Spoke and Handle Factory and many other industries are projected, with a view to early completion.

Taxable property has increased 100 per cent. within the past twelve months. The rate of taxation is limited in the city charter to half of one per cent., and the city offers an exemption from taxation to all manufacturing enterprises for a period of ten years. The county of Talladega supplies more crude material, in the way of minerals and timber, than any other county in the State. Almost within the corporate limits of the city are extensive deposits of the highest grades of limonite ores, yielding 50 to 58 per cent. metallic iron, with only a trace of phosphorus, and limestone abounds in the greatest abundance. Coal is within twenty miles by rail.

**THE TALLADEGA LAND & IMPROVEMENT CO.** owns 5,000 lots suitable for residences, business and manufacturing, in and adjacent to the city. Lots are donated to manufacturing enterprises, and liberal inducements offered to actual settlers. **SPRING LAKE PARK** is owned by this company, and it is being made the most attractive resort in the State. The lake covers an area of seven acres, and is a beautiful sheet of clear spring water. Parties seeking a healthy climate, free from malaria and epidemics, and a prosperous city, are invited to visit Talladega. Address for maps, etc.

**The Talladega Land & Improvement Co.,**      **Talladega, Ala.**



# DECATUR, ALA.

**POPULATION.**—In March, 1887, 1,200; in July, 1888, 7,000; an increase of over 500 per cent. in sixteen months.

**TRANSPORTATION.**—Thirty navigable rivers will be accessible by steamers from the wharves after the completion of the government works at Mussel Shoals, on the Tennessee river, in 1889. Two trunk lines of railroad are in operation at Decatur—the Louisville & Nashville, and the East Tennessee, Virginia & Georgia systems; and two more are in course of construction.

**MANUFACTORIES.**—There are already in operation, or nearly completed, forty manufacturing enterprises that will employ at least 3,500 skilled workmen. These will warrant a population of 20,000 in the near future.

**HEALTH STATISTICS.**—Death rate last year only 11 per 1,000 among the whites.

**IRON.**—The best grades of charcoal pig iron can be manufactured here at a cost not to exceed \$11.50 per ton.

**COAL.**—Coal for manufacturing purposes is now delivered in Decatur, by rail, for \$1.60 per ton. In a few months the mines up the river will deliver coal for about \$1.25 per ton.

**TIMBER.**—The finest timbers in the world are on the banks of the Tennessee river, adjacent to Decatur. Decatur is one of the largest hard wood producing centers in the South.

**SCHOOLS AND CHURCHES.**—Good school and church facilities are here already.

**FARMING LANDS.**—Decatur is the center of one of the finest agricultural regions in the South. The Tennessee valley produces all kinds of small grain, potatoes and fruits, as well as products characteristic of the South, such as cotton, tobacco, etc.

## Review of Decatur's Growth up to July, 1888.

The following enterprises have been located in Decatur and New Decatur, Ala., since February 1, 1887, (with few exceptions) and are in full operation, except where otherwise stated:

1. The Decatur Land, Improvement and Furnace Company was organized on the 11th day of January, 1887, and has laid out the town adjoining Decatur, known as New Decatur.
2. The Louisville & Nashville Railroad Company are now (July, 1888), completing their extensive new shops for the manufacture and repair of cars and locomotives; also roundhouses, etc., the whole covering 57 acres. It is estimated that these shops will employ 1,500 men.
3. The United States Rolling Stock Company are moving their extensive car shops from Urbana, Ohio, to Decatur, where they are putting up new works, covering 49 acres, for the manufacture of every description of cars. The machinery will be in place by September, 1888. The company will employ 500 men at first, and eventually 1,000.
4. The Decatur Charcoal & Chemical Works, running 48 ovens of a capacity of 55 cords of wood each, each cord producing two gallons of wood alcohol, 50 bushels of charcoal and 125 pounds of acetate of lime. This plant has a capacity to treat about 50,000 cords of wood per annum.
5. The American Oak Extract Company, the largest plant of the kind in the world, consuming 100 cords of wood daily in the manufacture of tanning extract. The plant is now being increased by one third.
6. A 70-ton Charcoal Iron Furnace, nearly completed and ready for operation, built by Gordon, Strobel & Laurean, of Philadelphia, on the latest improved designs. Cost \$111,000.
7. The Decatur Iron Bridge Construction Company, an immense plant with admirable machinery for building every description of railroad and other iron bridges.
8. The Ivens & Son Machine Company. Building (brick) 280 feet by 100. Manufacture boilers, engines, etc., and do all kinds of foundry work.
9. Cotton Compress (Morse, 90 inch.) built by Steers & Co., of New Orleans. Cost \$75,000, completed. The buildings are of brick and iron with stone foundation and have the largest storage capacity in the South.

10. The Decatur Car Wheel & Manufacturing Company. Capacity, 100 wheels per day at present; will be increased as fast as possible, as the company cannot now supply their orders.

11. Southern Horseshoe Nail Factory. These extensive works are being constructed, and will shortly be in operation.

12. Decatur Waterworks (both direct pressure and Holly system) now being constructed by Howland & Ellis, of Boston, Mass. There will be 38 miles of pipe, of which over one-half are laid already. The water will be turned on about September next, and Decatur will have an unrivaled water supply.

13. Moulthrop & Stevens' mammoth brick yard, occupying over 7 acres and employing 50 men, their steam machinery having a capacity of 75,000 brick per day. There are five other brick yards in Decatur, and brick can be furnished at the present time at from \$5 to \$6 per thousand.

14. H. S. Freeman's lumber mills and lumber yard. Daily capacity of mill 15,000 feet. Handles 2,500,000 shingles yearly, besides laths.

15. Arantz Brothers' saw mills and lumber yards. Operate 3 band-saws. Daily capacity of their mills 60,000 feet.

16. Decatur Lumber Company's saw mill, planing mill and dryer. A very large establishment.

17. Berthard & Company's sash, door and blind factory.

18. The Hoosier Mills & Building Company.

19. The Southern Lumber Company. Make sash, doors and blinds.

20. J. D. Jervis & Company's extensive factory for sash, doors, blinds, stairs and hardwood finish.

21. Decatur Builders' Supply Company's lumber yards and planing mills.

22. Decatur Artificial Ice Company; capacity 6 tons daily, to be increased shortly to 15 tons.

23. Decatur Cornice & Roofing Company; manufacture galvanized iron cornices and iron and tin roofing.

24. The Decatur Street Railway, running cars over 3½ miles of track. Will have 2½ miles more completed shortly. Is equipped with new rolling stock.

25. The Decatur Telephone Company, operating over 80 stations.

26. The Decatur Electric Light Co., running 30 arc lights (Brush system).

27. Grant & Company's furniture factory.

28. Decatur Building Association.

29. Bucheit's Bottling Works.

30. Decatur Printing Company.

31. Artificial Stone Works.

32. Decatur Plumbing & Supply Company.

33. Alabama Lumber & Fruit Package Company.

34. Decatur Carriage Company.

35. First National Bank. Paid up capital \$100,000.

36. Exchange Bank of Decatur. Capital \$100,000.

37. One daily and two weekly papers.

38. The new "Tavern" Hotel, in full operation, owned by the Decatur Land Improvement & Furnace Company, delightfully situated on their own grounds, magnificently furnished by the Robert Mitchell Furniture Company of Cincinnati, Ohio, with room accommodations for at least 125 guests. There are five other hotels in Decatur.

39. The Decatur Land, Improvement & Furnace Company's incandescent electric plant, furnishing lights to the "Tavern," also to stores, offices and private dwellings.

A block to contain an opera-house, stores and offices, is now being built by a joint stock company at a cost of \$60,000.

The Louisville & Nashville Railroad Company handle daily in their depot yards 640 cars, 360 going South and 280 North; employ 85 men, and pay out to employees \$6,000 monthly.

The East Tennessee, Virginia & Georgia Railway Company handle in their yards 150 to 200 cars, employ 14 men, and pay out in wages \$720 per month.

In March, 1887, the number of inhabitants in Decatur was 1,200; in March, 1888, 7,000 in Decatur and New Decatur. Since January, 1888, there have been over two hundred houses erected; many of them are substantial brick business houses.

The Decatur Land, Improvement & Furnace Company is offering most favorable terms to parties who will purchase lots for the purpose of building homes.

The capital stock of the company, by retirement of the treasury stock, is reduced to 50,000 shares, or \$5,000,000, of which 45,659½ shares have been issued and are now outstanding. It is largely held as an investment by small holders scattered through different States, very many of whom have also bought property in Decatur, and by persons engaged in business and various occupations in Decatur.

The strong financial condition of the company can best be appreciated by a perusal of its published statements of July 1st, 1888, a copy of which can be obtained from the secretary at New Decatur, Alabama.

For Maps, Illustrated Pamphlets, and Specific Information, address

## The Decatur Land, Improvement & Furnace Company

NEW DECATUR, ALA.

# ROANOKE CITY, VA.

POPULATION 1881, 400.

POPULATION 1888, 12,000.

Roanoke City is located in the mountains of Virginia, 1,000 feet above sea level—between the Blue Ridge range on the east and Alleghany range on the west.

It has an elegant Courthouse, Market-House, Opera House, Public School Houses, Firemen's Hall and many other public buildings.

Has a Gas Company with a capital of \$120,000.

Has an Electric Light System, both arc and incandescent—in course of construction.

Has a system of Water Works, the finest in the State, worth \$250,000.

Has 12 churches, representing nearly every denomination.

Has four banks, operating on an aggregated capital of \$450,000.

Is the headquarters of the Norfolk & Western Railroad Company, which employs 300 clerks.

Is the headquarters of the Shenandoah Valley Railroad, which employs 75 clerks.

Is the headquarters of the Pocahontas Coal Company, the largest coal operators in the world.

Is the headquarters of the Virginia Steel Company, which is backed by \$5,000,000 in cash.

Is the headquarters of the Virginia Company, operating on a large capital.

Is the headquarters of the Washington & Western Railroad Company.

Is the headquarters of the Virginia Mineral Railroad Company.

Is the headquarters of the Roanoke & Southern Railroad Company—now under construction.

Has a large wholesale and retail trade, embracing sixteen of the most productive counties in the Old Dominion, and its wholesale trade extends into West Virginia, Tennessee and North Carolina.

Has the most delightful and healthiest climate in the world.

Has, within fifty miles of it, a dozen of the most famous watering places in America.

Has The Crozer Steel & Iron Company, operating on a capital of \$500,000, employing 300 men, and turning out 120 tons of pig iron per day.

Has the Roanoke Machine Works, with a capital of \$1,000,000, and employing 1,000 men.

Has the Roanoke Rolling Mill, with a capital of \$150,000—in course of erection.

Has a Roller Flouring Mill, valued at \$15,000.

Has the Diamond Ice & Refrigerator Company, capital \$25,000.

Four Planing Mills, with a capital of \$25,000.

The railroads and various manufacturing enterprises of Roanoke have monthly pay rolls aggregating \$150,000, all of which is paid to citizens of Roanoke.

Has four hotels capable of accommodating 500 guests; Hotel Roanoke cost \$80,000.

375 houses were erected in Roanoke City during 1887, and at least 800 will be erected during 1888. There are at present 200 buildings under construction.

The bonded debt of Roanoke City is smaller than that of any city in the South of equal size, being less than \$150,000. The city tax rate is \$1.10 on the hundred dollars—lighter than that of any city in the South.

Roanoke City will spend, during 1888, \$16,000 for public school buildings; \$25,000 for sewerage; \$25,000 for streets, and about \$15,000 for miscellaneous public improvements.

An Opera House Company has been chartered and will erect a \$50,000 theatre building.

The Roanoke Street Railway & Transportation Company has been chartered and will construct three miles of street railway.

The Home Building & Conveyance Company has been chartered and are now building and preparing plans for 100 residences.

Has the Roanoke City Mills, capital \$20,000.

Trade of Roanoke has increased 300 per cent. during the past three years.

1,000 miles of railroad now in operation, focus at Roanoke.

Roanoke is 258 miles west of Norfolk, and 150 miles east of Bristol, on the Tennessee line.

The only city of any consequence within 200 miles of Roanoke is the city of Lynchburg, by the James.

Roanoke is the supply depot for a territory embracing 16 counties in Virginia and many of the border counties of West Virginia, Tennessee and North Carolina.

Roanoke is the headquarters of nearly all the mining companies now operating in the South-west.

Has the largest fruit and vegetable canning factory in the South, with a capacity of 15,000 cans per day.

Has the Roanoke Land & Improvement Company, operating on \$600,000 capital.

Has four Building and Loan Associations, capital \$350,000.

Has the Roanoke River passing along its borders, furnishing unsurpassed water power for manufacturing purposes.

Has more undeveloped mineral wealth within easy reach than any city in the South.

Roanoke will soon be the terminus of two divisions of the Norfolk & Western Railway system, thus adding 1,500 to its population.

Roanoke is building a Masonic Temple to cost \$25,000, and a Y. M. C. A. building to cost \$20,000.

Real estate is from 100 to 200 per cent. cheaper in Roanoke than in any city of promise in the South.

Roanoke will have a population of 25,000 souls when the census of 1890 is taken.

We want men of money and men of muscle.

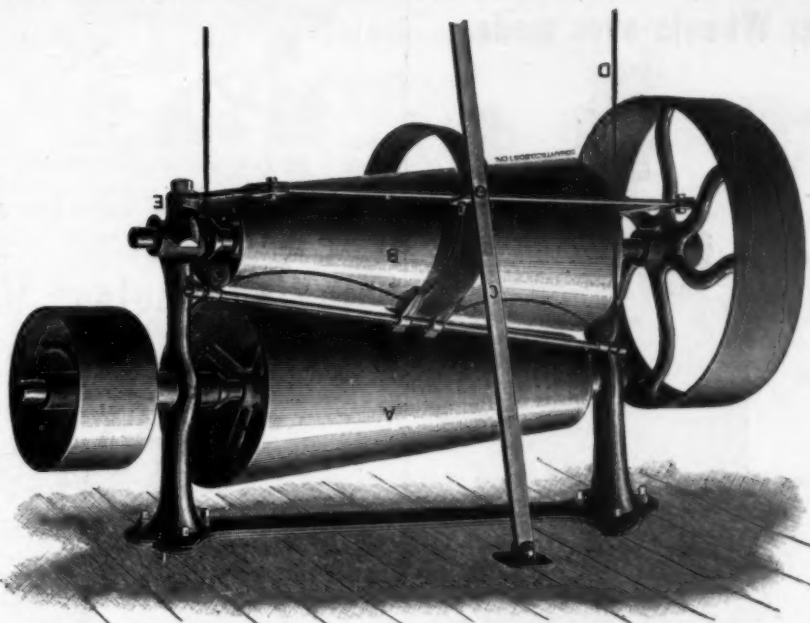
Has the West End Land Co., operating on a capital of \$40,000, paid up.



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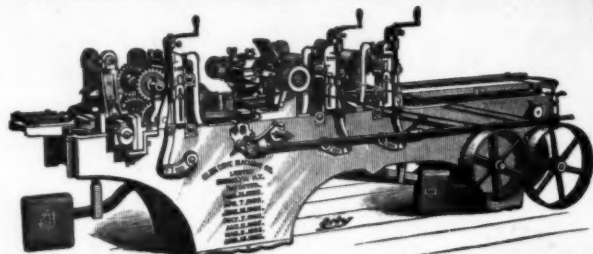
When ordered.	Name and Address.	Size of Wheel, Inches.	When ordered.	Name and Address.	Size of Wheel, Inches.
1879.	Arctic Ice Co., Augusta, Ga.	1-36	1883.	The Roberdel Mfg. Co., Rockingham, N. C.	1-39
	B. Merry, Berzella, Ga.	1-31		Hope Mills, Hope, N. C.	1-36
	J. B. Connelly, Augusta, Ga.	1-39	1884.	Porter Mfg. Co., Clarksville, Ga.	1-30
	Summerville Mills, Augusta, Ga.	1-27		Fairmount Mfg. Co., Williston, Ga.	1-45
1880.	Fee Dee Mfg. Co., Rockingham, N. C.	1-39		E. I. Du Pont, De Nemours & Co., Wilmington, Del.	1-18
	Langley Mfg. Co., Langley, S. C.	1-15		Geo W. Brackenr'dge, San Antonio, Texas	1-15
	Clifton Mfg. Co., Clifton, S. C.	1-54		Young & Hack, Augusta, Ga.	1-45
	Piedmont Mfg. Co., Piedmont, S. C.	1-54	1885.	Richmond & Alleghany R. R. Co., Richmond, Va.	1-18
1881.	D. E. Converse, Glendale, S. C.	1-18		San Antonio Water Works, San Antonio, Texas	1-33
	Eagle & Phoenix Mfg. Co., Columbus, Ga.	1-36		James Riddle & Son, Wilmington, Del.	1-39
	Arctic Ice Co., Augusta, Ga.	1-30	1886.	Roswell Mfg. Co., Roswell, Ga.	1-36
	" " " " " "	1-33		Thomas M. Holt, Haw River, N. C.	1-60
	" " " " " "	1-15		Reedy River Mfg. Co., Reedy River Factory, S. C.	1-36
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	Dr. J. S. Boyd, Clay Hill, Ga.	1-15		" " " " " "	1-48
	Thomas M. Holt, Haw River, N. C.	1-48		" " " " " "	1-51
	Eagle & Phoenix Mfg. Co., Columbus, Ga.	1-18		Marietta Paper Mfg. Co., Marietta, Ga.	1-18
	Princeton Mfg. Co., Athens, Ga.	1-39		" " " " " "	1-30
1882.	D. E. Converse & Co., Glendale, S. C.	1-18		Augusta Factory, Augusta, Ga.	1-48
	H. A. Merry, Berzella, Ga.	1-27		Lockwood & Kampman, San Ant'o, Tex.	1-18
	E. Lockhart, Eubanks, Ga.	1-27		" " " " " "	1-18
	South Carolina R.R. Co., Charleston, S.C.	1-18	1887.	Durham Water Works, Durham, N. C.	1-36
	Roswell Mfg. Co., Roswell, Ga.	1-30		Richmond Paper Mfg. Co., Richmond, Va.	1-36
	Richmond & Alleghany R. R. Co., Richmond, Va.	1-9		Augusta Electric Light Co., Augusta, Ga.	1-36
	Riverside Cotton Mills, Danville, Va.	1-48		Petersburg Electric Light Co., Petersburg, Va.	1-39
	Leak, Wall & McRae, Rockingham, N.C.	1-48		J. N. Williamson, Gibsonville, N. C.	1-39
1883.	Marietta Paper Mfg. Co., Marietta, Ga.	1-12		Riverside Cotton Mills, Danville, Va.	1-48
	" " " " " "	1-24		C. J. Milne & Son, Wilmington, Del.	1-48
	J. A. Harris, Holcomb's Rock, Va.	1-15		Porter Mfg. Co., Clarksville, Ga.	1-48
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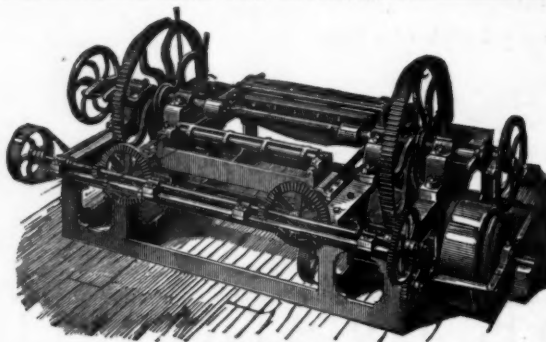
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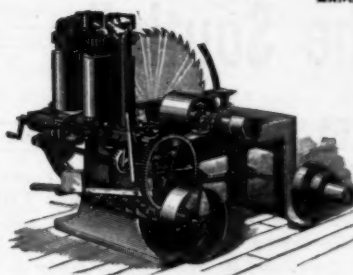
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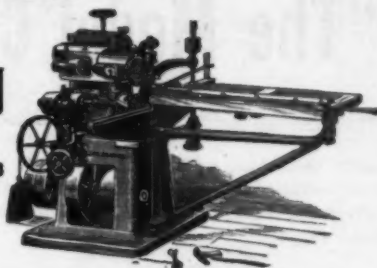
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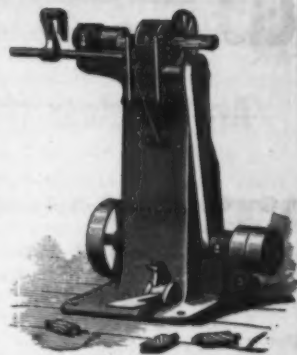
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Durable, Accurately Made, Double Drivers, Positive Feed, Completely Adjustable, AUTOMATIC CHANGE OF PITCH varies the pitch of knife to the varying size of log, always holding it in position to do the smoothest, soundest cutting on all sizes of log and thickness of cut—the perfection of cutting. Built in all sizes within practicable limit. Adapted to the production of all kinds of thin-cut lumber. Also builders of Clippers and Rolling Cutters for Dimension Veneer Stock and Special Machinery. Send for circulars.

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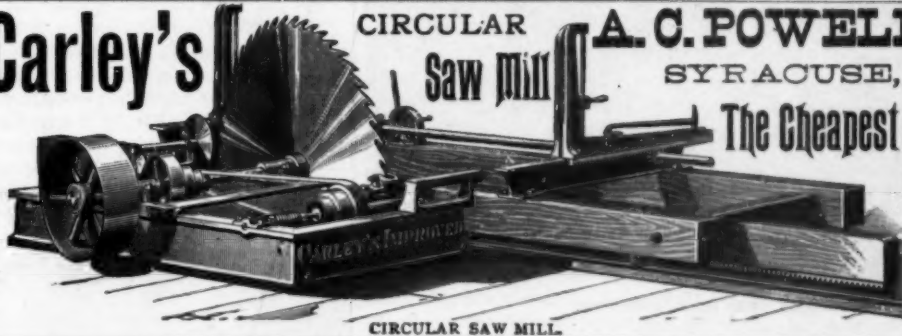
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The Cheapest and Best Mill

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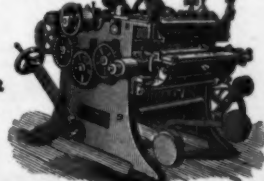
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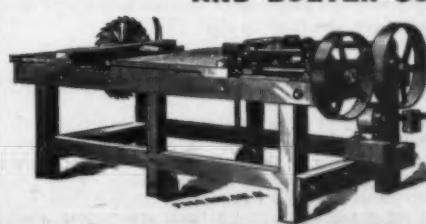
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# Anniston

THE CENTER OF  
Iron and Cotton Industry  
AND MINERAL WEALTH.

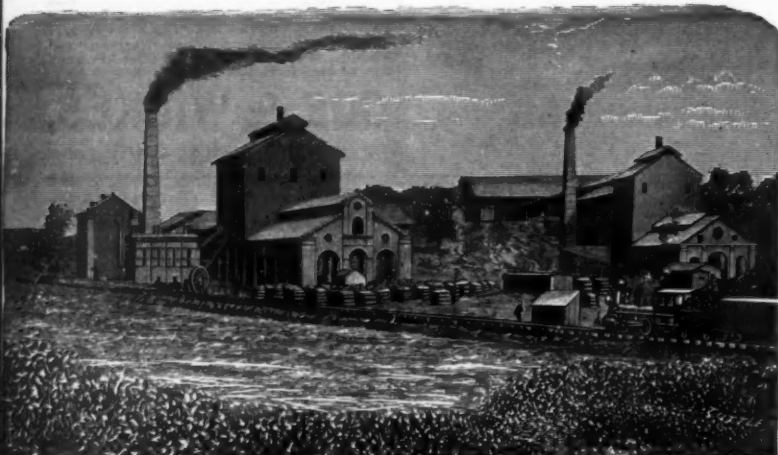
"The Model City of the South."

## IT IS

The Profits of Labor only that can add to the wealth and prosperity of a nation or community. It is this only that can make business successful and profitable, sustain and add to the value of real estate.

## WHERE

Nature's resources are greatest, where nature's capital in rich agricultural lands, and where iron, coal and other useful minerals are most abundant, most accessible and of superior quality for all purposes, there will capital find its safest investment, largest returns and labor reap its richest reward. It is to the Anniston District where the best professional mining engineers and experts of the United States declare the great center of the iron industry of the South will drift, where its manufacture will be most permanent and profitable, and where ores in the greatest abundance and accessibility exist, and where they will be most easily mined, that this applies.



WOODSTOCK FURNACES—ANNISTON.

## The Development of the Past Fifteen Years

Confirms all this, and every year convinces the experts of the correctness of their judgment. It is no longer opinion based on scientific and practical education; it is a fact that is clearly and successfully demonstrated, so that the visitor to the Anniston District can see at every step. The four iron furnaces that have been so long and successfully operated, and the new plant now being erected, and rapidly approaching completion, which will be capable of producing one hundred thousand tons of pig iron a year, demonstrate that

## NOWHERE ELSE IN THE SOUTH

Has the iron industry been so profitable and so successful, or been established on so permanent a basis, and of no district is this so universally conceded by all, while nowhere else have arrangements been perfected and already established on so complete a scale to work the crude iron into higher branches of manufacture to increase its value, and to bring into the district the profits of skilled labor. THE GREAT CAR WHEEL WORKS OF NOBLE BROS. & CO., their rolling mill and steam forge and machine shops, and the Alabama Car Works, have been absorbed by the

## UNITED STATES ROLLING STOCK COMPANY,

With a capital of \$4,000,000, for the purpose of adding to and enlarging the entire plant to build TWENTY CARS A DAY. Everything that goes into the creation of a car, except the tin for the roof and the wire nails, will be created from Anniston's crude material by her labor and skill. Fifty tons of wheel iron will be made into car wheels daily, twenty tons into car axles, fifty tons of pig iron into car and other castings, and fifty tons into bar iron and bolts, making nearly ten thousand dollars per day added to the wealth of the country by profitable labor converting nature's capital to the use of man. This company have a capital of \$4,000,000, and their Anniston works will represent a cash outlay of \$1,000,000. One thousand skilled mechanics will be employed as soon as the great enlargements under way can be completed.

## THE STEEL BLOOMARY

Consumes and increases the value of twenty tons of pig iron per day, while the Pipe Foundry converts to the use of man TWO HUNDRED TONS OF PIG IRON PER DAY in one of the largest and best planned and most convenient labor-saving works on this continent. The Foundry of Murray & Stevenson, Engine and Machine Works of Pinder & Co., and Boiler and Sheet Iron Works of J. & D. Noble, all add to the consumption of crude material by the creation of finished work.

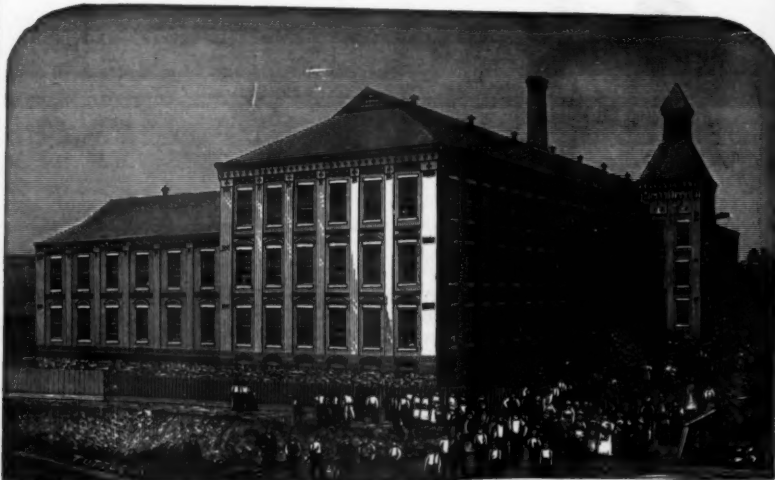
## NOR IS IT TO IRON ALONE

That Anniston relies for increase of wealth and population. The Cotton Factory, with eleven thousand seven hundred spindles and three hundred and seventy-five looms, employing over three hundred and fifty operatives, adds greater value to the products of agriculture by converting six thousand bales of cotton into cotton cloth. The immense ninety-inch Morse Cotton Compress, with its brick warehouses, is fast making Anniston a cotton market and commercial center, and aiding its wholesale and retail merchants to extend and hold the trade of the country tributary to Anniston that its system of railroads has opened to them. The Georgia Pacific, the East Tennessee, Virginia & Georgia Railroad systems,

## Give Direct Communication and Through Rates

To all parts of the country, while the Anniston & Atlantic Railroad, built by Anniston capital to open up new agricultural and mineral resources, gives Anniston, by connection with the Central of Georgia system, communication with the Atlantic sea coast and the new Anniston & Cincinnati Railroad, built and owned by Anniston citizens, opens up new resources and connections, and a shorter line with the great Northwest.

The proposed extension of the Anniston & Atlantic Railroad to Blocton will give another and shorter line to the great Cahaba Mines, producing the very best coal for domestic and manufacturing purposes in the South. Forty thousand acres of these coal lands, upon which a million and a half dollars have been lately spent in opening new mines and building several hundred coke ovens, ALL OWNED AND CONTROLLED BY ANNISTON CAPITAL, and developed to mine and manufacture three thousand tons of coal and coke per day, secures to Anniston for generations to come a full and certain supply of cheap fuel for all her industries, operated where a rich agricultural country can feed a manufacturing and commercial people, and where the



ALABAMA MANUFACTURING COMPANY'S COTTON MILL—ANNISTON.

## Best, Healthiest and Most Invigorating Climate in the World,

With mountain air and pure water, and an elevation of nine hundred feet above tide water, insures the health and comfort of the workman and his family; where health and comfort stimulate and lighten labor, and secure to it and its industries the reward due to both. It is these advantages which have been given by nature that enabled Anniston's citizens to create her past and present prosperity, and which secure her future. It is that they may participate in and avail themselves of these advantages that Anniston invites NEW CAPITAL AND TALENT AND ENERGY from all sections. We invite all to come and see, and on the spot to judge for themselves of Anniston's great resources and possibilities. The comfort and quiet of the famous Anniston Inn will make a visit to our city a treat and pleasure. Any information, attention and courtesy will be given and shown by addressing or applying to the

ANNISTON CITY LAND CO., Anniston, Ala.



# CONSTRUCTION DEPARTMENT

**WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.**

## ALABAMA.

**Anniston—Manufactures, &c.**—New York capitalists have purchased a controlling interest in the Anniston City Land Co. for about \$600,000, which sum will be reinvested in establishing new manufacturing enterprises. It is proposed by Anniston parties to establish five plants to cost not less than \$100,000 each and several smaller enterprises to cost in the aggregate \$100,000. If any information can be made public, D. T. Parker, president First National Bank, can probably give it.

**Anniston—Horse Shoe Factory.**—The Universal Horse Shoe Manufacturing Co. have purchased all the machinery for their factory, previously reported.

**Anniston—Building.**—It is proposed to erect a building to cost \$10,000 for the use of the Orphans' Home.

**Anniston—Publishing.**—J. L. LeGrand and others will publish a paper to be called the Alabama Medical and Surgical Age.

**Anniston—Saw Mills.**—The United States Rolling Stock Co., who are establishing large car and locomotive works, as previously reported, will build two saw mills, one in Alabama and one in Mississippi.

**Anniston—Street Railroad.**—The Anniston Street Railway Co. will extend their road to Anniston, and have been granted permit.

**Bessemer—Boilers.**—The De Bardeleben Coal & Iron Co. are erecting additional boilers at their two new furnaces.

**Birmingham—Gas Works.**—The Birmingham Gas & Electric Light Co. have, it is reported, decided to issue the second mortgage of \$200,000, previously referred to.

**Birmingham—Railroad.**—McTigh & Stallings have been awarded the contract to build a 1½ mile branch of the Birmingham Mineral Railroad from Sloss to the top of Red Mountain.

**Birmingham—Furniture Factory.**—The lumber mill of the Gate City Lumber Co., at Gate City, lately mentioned as being increased in capacity, has been purchased by G. E. Jones & Co., who are preparing to add a furniture factory.

**Birmingham—Machine Shop.**—Milner & Kettig have put a large pipe-cutting and threading machine and a large power drill press in their machine shop.

**Birmingham—Cold Storage.**—The Christian Moerlen Brewing Co., of Cincinnati, Ohio, will erect a building to be used for cold storage purposes.

**Blount—Coal Mines.**—It is stated that the Cahaba Coal Mining Co., controlled by Anniston capitalists, will increase the output of their mines from 3,000 to 5,000 tons daily.

**Brewton—Lumber Mill.**—A lumber mill is being built by Lovelace Bros.

**Calera—Iron Furnace.**—The Calera Charcoal & Chemical Co. will reorganize and put their charcoal iron furnace and chemical plant in operation.

**Demopolis—Ice Factory.**—It is rumored that an ice factory will be erected.

**Eufaula—Gin.**—W. B. Davis is rebuilding his gin lately mentioned as burned.

**Florence—Saw Mill.**—A saw mill will be erected by Mr. Reynolds, of Columbia.

**Florence—Gin Factory.**—The Coleman Cotton Gin Co. are reported as building an addition to their gin factory to be used as a blacksmith and forge room.

**Florence—Planing Mill.**—J. W. Nichols & Co. are erecting a new building for their planing mill.

**Florence—Knitting Factory.**—It is reported that a knitting factory will be started by Mr. Knowles, of Philadelphia, Pa., and that the contract for the building has been let to Austin & Clark.

**Gadsden—Lime Works.**—C. Midgely & Co. have started lime works at the tunnel on the Anniston & Cincinnati Railroad, about 10 miles from Gadsden.

**Geneva—Saw Mill.**—A saw mill has been erected by Morrison & Bro.

**Huntsville—Building.**—O. M. Huntley will superintend the erection of the building for the United States Government. Work on same will soon be commenced.

**Mobile—Printing Office.**—The Mobile Register will put in their printing office a perfecting press.

**Montgomery—Railroad.**—The Alabama Midland Railroad Co., of Georgia, and the Alabama Midland Railroad Co., of Alabama, have consolidated and organized with O. C. Wiley as president; A. St. C. Tennille, vice-president; W. F. Joseph, secretary, and J. C. Henderson, treasurer. They ratified the contract with the Alabama Terminal & Improvement Co. for the building of their road. Work will be commenced at once.

**Montgomery—Electric Light Plant.**—The Brush Electric Light & Power Co., lately mentioned as enlarging building to increase capacity of plant, are adding machinery for incandescent lighting.

**Montgomery—Sewerage System.**—The contract for building the extension of the sewerage system, previously mentioned, has been awarded to Clement Bros., of Cleveland, Ohio, at \$53,953.64.

**Montgomery—Iron Furnace, &c.**—The Montgomery Furnace & Chemical Co. will soon reorganize and complete their charcoal iron furnace and chemical plant.

**Montgomery—Boats, &c.**—Proposals for building one towboat, two snagboats, two drilling barges and two dumping flats will be received until November 26 by R. L. Hoxie, captain engineers U. S. A.

**Selma.**—The American Building & Loan Association has been organized with B. H. Craig as president.

**Sheffield—Knitting Factory, Yarn Mill, &c.**—The Sheffield Land, Iron & Coal Co. have donated a site to George E. Knowles, of Trenton, N. J., who will build a knitting factory at once with a capacity of 600 dozen hose daily. The main building will be two stories, 50x200 feet, with an engine and boiler-house and a dyehouse. About 200 hands are reported to be employed when running full capacity. It is probable that other parties will start a yarn mill in connection with the factory.

**Sheffield—Furnace.**—The Lady Enslay Furnace Co. will add to their new furnace just about completed, four large boilers, another blowing engine and another hot blast stove. The furnace is 75x17 feet, and it will soon go into operation. The stock-house will be extended 60 feet at each end.

**Sheffield—Street Railroad.**—The Sheffield Street Railway Co. will hold a meeting on November 27 to consider issuing \$25,000 of bonds to extend their railroad and purchase additional equipments.

**Sheffield—Church.**—The Presbyterians will shortly let the contract for building a church.

**Talladega—Gas Works.**—The Talladega Gas Co. have put in a new retort.

**Talladega—Building.**—The Young Men's Christian Association contemplate erecting a build to cost \$10,000.

**Tusculum.**—The Tusculum Land & Improvement Co. is being organized by A. H. Keller, E. B. Almon, A. L. Moody, H. R. Carr and others.

**Uniontown—Well.**—New York parties have contracted to sink an artesian well.

## ARKANSAS.

**Fort Smith.**—The Kansas City & Fort Smith Investment Co., capital stock \$120,000, has been chartered by A. D. Beedle, L. H. Day, F. S. Grove and others.

**Fort Smith—Furniture Factory.**—Samuel McCloud, George T. Sparks and John A. Bullock have chartered the McCloud & Sparks Furniture Factory Co., capital stock \$30,000, to start a furniture factory.

**Huntington—Street Railroad.**—A company has been organized to build a street railroad.

**Little Rock—Mining, &c.**—The Kellogg Mining & Milling Co., capital stock \$100,000, has been organized to develop mines and do a milling business near Little Rock. J. G. Sandige is president, G. F. Martin, vice-president; Anthony Koenen, secretary, and C. T. Walker, treasurer.

**Little Rock—Hotel.**—The Catholic Church property at Center and Second streets has been purchased by parties who are under contract, it is stated, to build a hotel or a block of large buildings.

**Little Rock—Pickling and Canning Factory.**—There are prospects of a pickling and canning factory being moved from Cincinnati, Ohio, to Little Rock.

**Little Rock—Car Couplers.**—The capital stock of the Layman Automatic Car Coupler Co., previously mentioned as chartered by H. D. Layman and others, is \$500,000. The object of the company is to manufacture and sell automatic car couplers.

**Little Rock—Iron Furnace, &c.**—It is stated that the Standard Charcoal Iron & Chemical Co., of Nashville, Tenn., will erect a charcoal iron furnace and chemical plant.

**Little Rock—Well.**—The Cook Well Co., of St. Louis, Mo., has contracted to sink an artesian well for the Little Rock Oil & Compress Co.

**Little Rock—Foundry and Excelsior Factory.**—The D. E. Jones Co. have purchased the Brice & O'Kelly iron foundry. They contemplate rebuilding their excelsior factory, previously mentioned as burned.

**Little Rock—Building.**—The Little Rock Junction Railway Co., contemplate erecting a two-story iron covered office building.

**Paragould—Saw Mills.**—Reed & Amberg have purchased 5,000 acres of timber lands near Paragould, and are building saw mills. One mill will have a capacity of 30 M feet daily.

**Pine Bluff—Gas Works.**—The Southwestern Light & Improvement Co. have, it is stated, increased the capacity of their gas works.

**Pine Bluff—Bagging Factory.**—J. L. Goodbar offers to subscribe \$10,000 towards starting a cotton bagging factory.

**Pine Bluff—Cotton Mill.**—Richard Greer, of Summerdale, Ill., has been prospecting with a view to moving his cotton factory from Illinois to some point in Arkansas.

**Silver Hill—Mining Machinery.**—Pumping and other machinery is reported as being erected at the Silver Hill mine.

## FLORIDA.

**St. Augustine—Stone and Marble Works.**—The St. Augustine Stone & Marble Works are being enlarged.

**Sutherland—Wharf.**—The Sutherland Co. have let contract for a wharf 2,800 feet long.

**Tampa.**—The city has voted to issue \$75,000 of bonds for improvements.

**Volusia—Bridge.**—E. S. Bates, James P. Kelly and P. M. Buckingham, of Jacksonville, have chartered the Florida Bridge Co., capital stock \$100,000, to build a bridge across the St. John's river. The office of the company is to be at Jacksonville.

## GEORGIA.

**Adairsville—Building.**—The Baptists will erect an institute building. G. M. Boyd can give information.

**Americus—Railroad.**—Wright & Strothers are about commencing work on their contract for building the extension of the Central Railroad of Georgia to Eden, Ala.

**Americus—Railroad.**—The Americus, Preston & Lumpkin Railroad Co. are making preparations for changing the gauge of their road from narrow to standard.

**Athens—Foundry and Machine Shop.**—The Athens Foundry & Machine Works, lately mentioned as to double their capacity, will start the manufacture of boilers.

**Athens—Sewerage System.**—The city will decide by a popular vote on December 3 whether or not to issue \$50,000 of bonds to build the sewerage system reported last week.

**Atlanta—New Town, Brick-yard.**—It is reported that Julius Brown has optioned 1,000 acres of land seven miles from Atlanta with a view to starting a town. A brick-yard is also reported to be started, and a dummy railroad from Atlanta to the town may be built.

**Augusta—Guano Works.**—Branch guano works are being built by the Nassau Guano Co.

**Augusta—Guano Works.**—The Augusta Guano Co. have, it is stated, started works on Gwinnett street.

**Brunswick—Paint Shops.**—The Brunswick & Western Railroad Co. will rebuild on a larger scale their paint shops, reported last week as burned.

**Brunswick—Grist Mill.**—A new grist mill has been erected by Price & McNash.

**Brunswick—Lands.**—The Brunswick & Western Railroad Co., previously reported as to make extensive improvements to their properties, will expend within two years about \$125,000 in reclaiming and improving marsh lands.

**Brunswick—Street Railroad.**—The Brunswick Street Railway Co. will build another line of road.

**Brunswick—Land.**—The Brunswick Co. will lay out about 80 acres of land into building sites, construct parks, &c.

**Brunswick—Tub and Bucket Factory.**—It is probable that a factory for manufacturing tubs, buckets, barrels, &c., will be started with a capital of \$40,000.

**Brunswick—Sash, Door and Blind Factory.**—There are prospects of a sash, door and blind factory being started.

**Brunswick—Residence and Church.**—Mr. Fairbanks, of Chicago, Ill., has commenced on a residence at Jekyll Island to cost about \$20,000, and will, it is said, also build a church.

**Calhoun—Printing.**—The Times Printing Office of H. A. Chapman, reported in this issue as burned, will be re-established.

**Cedartown—Brick Works.**—The name of the company reported last week as formed to start brick works is the Cedartown Brick



Co. Their capital stock is \$5,000. Their works will have a capacity of 30 M bricks per day at first, and will shortly be increased to 100 M daily. Capital stock will be increased to \$20,000.

Columbus—Dummy Railroad.—The Girard & Brownville Street Railroad Co. has been formed to build a dummy railroad. W. B. Tift can give information.

Columbus—Stables, Repair Shops, &c.—The Columbus Street Railroad Co. will in a few days commence the erection of new stables, new carhouse and blacksmith shop for their street railroad, and carshop and engine house and repair shops for their dummy railroad.

Columbus—Building.—Mr. Rankin contemplates erecting a large four-story brick building.

Dahlgone—Railroad.—The Blue Ridge Railroad Co., previously mentioned, has been organized. The object of the company is to build a standard-gauge road from Atlanta to the North Carolina State line. J. C. Welburn can give particulars.

Dalton—Factories.—A company with a capital stock of \$60,000 is being organized to take stock in new factories that may start on lands owned by the company.

Dawson—Grist Mill and Gin.—Brinn & Bro. will at once rebuild their grist mill and cotton gin, reported last week as burned.

Emerson—Malleable Iron Works.—J. Lang, of Hartford, Conn., will build the malleable iron works reported last week. He will commence work at once, and erect three buildings 60x160 feet. About 150 hands are reported to be employed.

Griffin—Bagging Factory.—A bagging factory is being agitated.

Marietta—Marble Works.—The marble works of McClatchey & Bailey have been enlarged.

Montezuma—Warehouse.—Mr. Maxwell will build a warehouse.

Montezuma—Guano Factory.—There is talk of starting a guano factory. Joseph Easterlin can probably give information if anything is done.

Rockmart—Mining.—The Toledo Sienna Mining Co., capital stock \$15,000, has been organized at Toledo, O., with Charles Buetz as president; E. H. Cady, vice-president, and M. C. Fogarty, secretary and treasurer.

Savannah—Bridge.—G. H. Crafts, of Atlanta, has commenced work on his contract to build an iron bridge across the Savannah, Florida & Western Railroad tracks for the Belt Railroad. The bridge will be 120 feet long and 14 feet wide.

Savannah—Moss Factory.—Mr. Gardner, of Elgin, Ill., is making investigations with a view to starting a moss factory at Savannah and probably other places in the South.

Wenona—Saw Mill.—The Dooly Lumber Co., composed of R. C. Wilder's Sons, of Macon, and J. L. Wagner, of Jackson, will build a saw mill at once.

#### KENTUCKY.

Carlisle—Buggy Factory.—The Robertson Wheel & Axle Co., M. Dills, president, contemplates starting a buggy factory, and want to purchase machinery for such a factory; also machinery for turning hub and axle castings.

Carrollton—Woolen Mill.—The Carrollton Woolen Mills, reported last week, contemplates putting in 26 additional looms. They now have 74.

Frankfort—Furniture Factory.—Joseph Staten is making efforts to organize a stock company to start a furniture factory. If successful the old cotton mill building will be leased.

Harrodsburg—Machine Shops.—The machine shops of the Louisville Southern Railroad Co., reported last week as to be moved from Louisville to Harrodsburg, will be increased in capacity. Work will be commenced at once.

Henderson—Furniture Factory.—The \$36,000 stock company lately mentioned as formed to operate the furniture factory of Mr. Shellhose, of Tell City, Ind., which is to be moved to Henderson, have commenced work on factory. W. M. Cummock is director of the company.

Henderson—Cotton Mills.—It is reported that arrangements are now being made to double the capacity of the Henderson Cotton Mills next spring. The present capacity is 544 looms and 21,000 spindles.

Hopkinsville—Laundry.—A party is preparing to start a steam laundry.

Kennec—Coal Mines.—The consolidation of the several coal mining companies to be known as the United Jellico Coal & Iron Co., previously mentioned, has been completed. The Proctor Coal Mining Co. has not entered in the consolidation, and the capital stock has been placed at \$5,000,000 instead of \$6,000,000. The company has about 60,000 acres of land, and will purchase additional lands.

Lexington—Electric Light Plant.—It is reported that the plant of the Lexington Electric Light Co. is being enlarged.

Lexington—School.—The American Missionary Society, of New York, will erect a school building to cost \$12,000.

Louisville—Gas Receiver.—William F. Shanks, previously mentioned as contracting to build a large gas receiver for the Louisville Gas Co., has thrown up the contract.

Louisville—Warehouse.—Givens, Headley & Co. have purchased a site on Main street to build a tobacco warehouse, three stories, 60x210 feet. Work has commenced. M. Q. Wilson is architect.

Louisville—Cement Mill.—Another cement mill is shortly to be established.

Louisville—Woolen Mill and Jeans Factory.—A woolen mill and a jeans pants factory are reported to be moved to Louisville. The secretary Commercial Club can give information.

Louisville—Cement Works.—Arrangements are being made by the K. & I. Cement Co. to double the capacity of their works.

Madisonville—Tobacco Factory.—The building reported last week as being erected by Virgil M. Slaton is for handling tobacco in strips. It is 24 feet high, 40x100 feet. He will add machinery for manufacturing plug tobacco; also steam drying apparatus.

Owensboro—Railroad.—The Owensboro, West Louisville & Sebree City Railroad Co., previously reported, have organized.

Paducah—Brewery.—Mr. Senns, of Senns Bros., Louisville, is thinking of building a beer brewery.

#### LOUISIANA.

Abbeville—Sugar Mill.—A tramway is being built at the Rose Hill sugar mill of J. Henry Patnam.

Abbeville—Sugar Refinery.—A large sugar refinery is being erected on the Ramsey place, in Vermilion parish, by Martin & Bagley.

Alexandria—Sugar-house.—W. P. Flower has put a new pan in his sugar-house.

Ascension Parish—Sugar-house.—Some new machinery has been put in the Bell Terre sugar-house.

Baton Rouge—Sugar Mill.—It is stated that a two-roller supplemental mill has been erected by Burke & Dougherty on their Westover plantation.

Brasly Landing—Sugar Mill.—The sugar mill of Henry Laws, of Cincinnati, O., has, it is stated, been considerably improved.

Conway—Grist Mill.—O. O. Andrews has added a grist mill to his cotton gin and put in steam power.

Covington—Pottery Works, &c.—J. Bercegeay and M. J. Deady, of New Orleans, La., are building pottery works and clay furnace factory. They own clay banks.

Covington—Hotel.—A large hotel is reported to be built soon. M. J. Deady can probably give information if true.

Delta—Levees.—John Scott & Sons have been awarded the contract for building about 35,000 cubic yards of leveeing. E. C. Manning and John Scott & Sons have received contracts for other levee work.

Farmerville—Gin.—A cotton gin has been erected by E. Roan.

Farmerville—Mill and Gin.—A mill and gin has been erected by Frank Dillard.

Franklin—Sugar Refinery, &c.—McLaury, Underwood & Scott will rebuild their sugar-house and refinery, reported last week as burned. The loss was \$100,000.

Loreauville—Sugar Mill.—John F. Hoffman has erected a bagasse burner and a three-roller sugar mill at the sugar-house on his Charlotte plantation.

Loreauville—Sugar-house.—Adrien Gon-soulin has put in a bagasse burner.

Mancha—Sugar Mill.—J. D. Houston has lately erected a second three-roller sugar mill on his Mulberry Grove plantation.

New Orleans—Levee.—The contract for building the Hard Times Wilson levee in Tensas parish, will be awarded to John McGinty at 19 cts. per yard. About 700,000 cubic yards are to be built.

Pattersonville—Sugar Mill.—L. S. Clark & Bro. have erected a two-roller supplemental mill on their Lagonda plantation.

Port Allen—Sugar Mill.—It is reported that a two-roller supplemental mill has been erected on the Poplar Grove plantation by the estate of J. L. Harris.

Gouldsboro—Incline.—The Texas & Pacific Railroad Co. are building a new incline.

Spearsville—Saw Mill.—A saw mill has been erected by Lopez McDonald.

Spearsville—Mill and Gin.—Joseph Carroll has erected a new mill and cotton gin.

St. Mary Parish—Sugar-house.—Some new machinery is contemplated to be added to the sugar-house on the Albania plantation next year. About \$12,000 have been spent in improvements this year.

#### MARYLAND.

Baltimore—Wharves, &c.—The Richmond & York River Line, previously mentioned as purchasing land at Light and Lee streets, and to build wharves, piers, warehouses, &c., have commenced making the improvements. The warehouse will be about 75x325 feet. The wharves will be large enough to admit of 3 or 4 vessels being loaded at one time.

Baltimore—Buildings.—W. H. Oliver will erect 12 three-story brick houses on Roland avenue and 29 two-story brick houses on Oliver avenue; M. S. Dorsey, 7 two-story houses at Dexter and Stockholm streets; Richard Cromwell, four-story brick warehouse on Pratt street; J. B. Amidon, a four-story brick warehouse on Frederick street; Adam Miller, 8 two-story houses on Union avenue, and the Savings Bank of Baltimore, a three-story brick building on Gay street adjoining their bank.

Baltimore—Houses.—Samuel D. Price has commenced work on a row of brick houses on Barclay street and a row on Biddle street.

Baltimore—Brush Factory.—The firm of O'Connor, Weaver & Co. has been formed to manufacture and sell all kinds of brushes.

Baltimore—Cigar Factory.—H. Ellis & Co. have put steam-power machinery in their cigar factory on North Sharp street.

Baltimore—Building.—Henry Seim & Co., glass manufacturers, will erect a two-story building at their works.

Baltimore—Canning Factory.—Platt & Co. will rebuild their oyster and fruit canning factory, reported in this issue as burned.

Baltimore—Rolling Mill.—It is reported that the South Baltimore Car Works Co. are negotiating for the purchase of the Baltimore & Ohio Railroad Co.'s rolling mill at

Cumberland, with a view to moving it to Baltimore.

Calvert County—Railroad.—John T. Bond has contracted to furnish the Baltimore & Drum Point Railroad Co. with 80 M cross-ties.

Catoctin Furnace—Iron Ore Mines.—The output at the Catoctin iron ore banks has been largely increased. A new ore washer will be erected.

Centerville—Electric Light Plant.—W. F. Johnson, representing the Edison Electric Light Co., of New York city, is making efforts to organize a local company to erect an electric light plant.

Greensboro—Carriage Factory.—James S. Richards will build a carriage factory.

Locke—Canning Factory.—Henry C. Ridgely will enlarge his canning factory by next year.

Ridgely—Canning Factory.—Day Bros. will build an addition to their canning factory during the winter.

Salisbury—Iron and Brass Foundry.—Grier Bros., of Milford, Del., will build an iron and brass foundry at once.

Georgetown, D. C.—Railroad.—Efforts are being made to have the Baltimore & Ohio Railroad Co. or the Baltimore & Potomac Railroad Co. extend a branch of their road to the water front of Georgetown.

Washington, D. C.—Residence.—Myron M. Parker will build a three-story brownstone residence on Clifton street to cost about \$40,000. Work will be commenced next spring.

Washington, D. C.—Buildings.—Westcott & Wilcox have broken ground for three brick buildings on Twenty-third street to cost \$18,000.

Washington, D. C.—School.—The contract to erect an 8-room school building at First and L streets has been awarded to George F. Cook at \$23,244.

Washington, D. C.—Residence.—James W. Orme has commenced work on an \$11,000 residence on K street.

Washington, D. C.—Buildings.—Susie C. Latimer will erect three dwellings at New Jersey avenue and P street to cost \$6,600, and E. J. Waltz, 4 dwellings on Second street, southwest, to cost \$3,500.

#### MISSISSIPPI.

Brookhaven—Saw Mill.—A saw mill with a daily capacity of 50 M feet will be erected near Brookhaven by Norwood & Butterfield, of Chicago, Ill.

Estabatchie—Saw and Planing Mills.—The Leaf River Lumber Co., reported last week as enlarging saw mill, are increasing its capacity to 40 M feet daily. They are also building a planing mill with daily capacity of 30 M feet.

Glendale—Gin.—T. C. Ferguson will rebuild his gin, mentioned last week as burned.

Greenville.—The Citizens' Building & Loan Association, capital stock \$200,000, has been chartered by E. N. Thomas, J. C. Head and others.

Grenada—Oil Mill.—The Grenada Oil Co. have improved their cotton-seed oil mill and erected an additional building.

Lexington—Mill and Gin.—A steam mill and gin have been erected 6 miles from Lexington by J. H. Richmond & Son.

Mississippi—Saw Mill.—The United States Rolling Stock Co., of Anniston, Ala., will erect a saw mill at some point in Mississippi to cut timber for their car works.

Natchez—Electric Light Plant.—The Citizens' Electric Light Co. are thinking of adding to their plant machinery with a capacity of 1,500 incandescent lights.

Natchez—Electric Light Plant.—The Thomson-Houston Electric Light Co. will erect a plant for experimental purposes. Bids for lighting the city are now being received by the mayor, as previously stated.



Silver Springs.—A \$50,000 building and loan association has been organized.

Vicksburg—Oil Mills.—The Refuge Oil Mills (cotton-seed) have been repaired and some new machinery has been put it.

#### NORTH CAROLINA.

Asheville—Saw Mill.—The Buncombe Lumber & Manufacturing Co., reported last week as chartered, are now building a saw mill.

Blue Wing—Railroad.—It is reported that arrangements are being made to build a railroad from Clarksville to Blue Wing and that work will be commenced in 30 days.

Charlotte—Track Tanks.—It is reported that the Richmond & Danville Railroad Co. will build track tanks along their road.

Durham—Coal Lands.—Major W. A. Guthrie will form a stock company to prospect certain lands supposed to contain coal. He has optioned 1,200 acres.

Durham—Thread Factory.—W. Duke, Sons & Co. are thinking of starting a large thread factory, but have not definitely decided.

Goldsboro—Cotton Factory.—The building of a cotton factory is again being agitated.

Goldsboro—Gas Works.—Gas works are reported to be built soon. The mayor can probably give information.

Hyde County—Mill.—The M. Makely mill property has been purchased by Northern parties for \$100,000.

Jonesboro—Cotton Mill.—There is talk of starting a 2,000-spindle cotton mill with building large enough for 5,000 spindles. J. E. Taylor can give information if anything is done.

Murphy—Iron Furnace, &c.—A charcoal iron furnace and chemical plant is reported to be erected by the Standard Charcoal Iron & Chemical Co., of Nashville, Tenn.

Randolph County—Stamp Mill.—A 10-stamp mill will be erected at the Stafford gold mine.

Red Springs—Mill.—A mill is reported to be started by Judge Brown.

Red Springs—Lath Mill.—It is reported that Hall & McKay will start a lath mill.

Salisbury—Gold Mine.—Boston parties will fully develop the Southern Bell gold mine in Rowan county. They will overhaul the machinery. Capt. Warren, of Charlotte, will have charge of the work.

Staley—Cotton Mill.—The Reliance Cotton Mill Co. have started their cotton mill. Capacity is 780 spindles at present.

Statesville—Corundum Mine.—W. A. Eliason is manager of the syndicate lately mentioned as formed to develop a corundum mine.

Wilmington—Pine Fibre Factory.—The Acme Manufacturing Co. will rebuild on a larger scale their pine fibre factory at Cronly, mentioned last week as burned. Preparations will be made for starting similar factories at other places.

#### SOUTH CAROLINA.

Camden—Cotton Factory.—A \$100,000 stock company will be organized to build a cotton factory. W. M. Shannon, H. G. Harrison, J. M. Heath, A. D. Kennedy and others are interested.

Camden—Cotton Compress.—A cotton compress is reported to be erected next year. W. M. Shannon can probably give information.

Centreville—Gin.—Wylie Teems has started a gin.

Charleston—Cotton Mill.—The Charleston Cotton Mills Co., lately mentioned as to put in 7,000 additional spindles, have awarded the contract for building the addition to their mills to D. A. J. Sullivan.

Charleston—Barrel Factory.—The Palmer Manufacturing Co. are now putting the additional machinery in their barrel factory, previously mentioned.

Charleston—Cathedral.—The Catholics are preparing to build a new cathedral. P. C. Kelly, of New York city, is now in Charleston and will prepare plans.

Cheraw—Foundry.—It is stated that the Cheraw Iron Works will soon build a new iron foundry, 90x30 feet.

Columbia—Reservoir.—It is probable that the city will build an additional reservoir of 5,000,000 gallons capacity. The mayor can give information when anything definite is done.

Edgefield—Cotton Factory.—There is talk of building a cotton factory.

Michaelsville—Saw and Flour Mills.—Charles S. Wilson will improve his saw and flour mills.

Walterborough—Rice Mill.—It is reported that a company has been formed to start a rice mill.

Walterborough—Canning Factory.—A canning factory is reported to be started.

Walterborough—Phosphate Mining.—Col. Gregg has commenced mining phosphate at Horse Shoe.

Winnabow—Gin.—A new gin has been erected by T. K. Elliott.

#### TENNESSEE.

Chattanooga—Ice Factory.—The Lookout Ice & Cold Storage Co., reported last week as increasing capital stock to \$120,000, have not yet decided as to what improvements will be made.

Chattanooga—Spring Factory.—Cuyler & Johnston will increase the capacity of their bed-spring factory at once.

Chattanooga—Plating Works and Foundry.—Additional machinery is being put in the Lee Electro-Plating Works. Their foundry will probably be enlarged soon.

Chattanooga—Wood-working Factory.—The Loomis & Hart Manufacturing Co. have purchased considerable new machinery for their wood-working factory.

Cleveland—Fire-brick Works.—George Carlyle & Sons will increase the capacity of their fire-brick works at once.

Cleveland—Railroad.—A subscription of \$50,000 has been voted to the Chattanooga, Cumberland & Murphy Railroad.

Cleveland—Candy Factory.—A candy factory will probably be started by J. C. Whitaker, of Knoxville.

Cumberland Gap—Coke Ovens.—It is reported that J. H. Allen has leased coal lands and will organize a stock company to build a large number of coke ovens.

Hester Mills—Flour Mill.—A company is being worked up to build a 100-barrel roller flour mill.

Knoxville—Furniture Factory.—W. H. Hazell, who has been manufacturing furniture on a small scale, has organized the Knoxville Hardwood Manufacturing Co., to erect a furniture factory, three stories, 40x60 feet. About \$5,000 of machinery will be put in.

Liberty—Flour Mill.—A flour mill is reported as being erected.

Memphis—Sewing Machines.—The Aldrich Sewing Machine Co., Limited, have secured their charter.

Memphis—Spoke Factory.—Beck & Gardner, of Union City, lately mentioned as to move their spoke factory to Memphis, will next spring move their factories from Union City and Rialto to Memphis, consolidate them and increase capacity to 20 M spokes daily.

Nashville—Water Works.—The superintendent of the city water works has recommended that a new pumping engine of 10,000,000 gallons capacity daily be put in. The present engine is a Holly engine of same capacity.

Nashville—Hospital.—The city council contemplate erecting a new hospital. The mayor can give information when anything is done.

Nashville—Iron Pipe.—The contract to furnish the city with 2,601 tons of iron water pipe and special castings has been awarded to the Addison Pipe & Steel Co., of Cincinnati, O., at \$22.44 per ton for pipe and \$44 per ton for castings.

Nashville—Electrical Railroad.—The McGavock & Mt. Vernon Street Railroad Co. contemplate running their cars by electricity. They will put on a motor to test the system first.

Nashville—Street Railroad.—The Main Street & Gallatin Pike Street Railroad Co. and the Nashville & Edgefield Street Railroad Co. have consolidated as the Edgefield & Nashville Street Railroad Co.

Nashville—Electric Light Plant.—The Nashville-Jenny Electric Light & Power Co. have received permit to erect their plant previously reported.

Nashville—Electric Light Plant.—The Nashville Light & Power Co. will increase the capacity of their plant by adding a 150 horse-power compound engine and two 75 horse-power boilers, another 650-light Westinghouse incandescent machine and two Brush arc machines. The improvements will cost about \$30,000.

South Pittsburg—Hotel.—A hotel is being built by J. A. Jenkins.

Stribling—Charcoal Ovens.—The La Grange Iron Co. are building 25 charcoal ovens.

Tullahoma—Laundry.—H. W. Batchelder contemplates starting a steam laundry at some point in the South, and wants to purchase machinery.

#### TEXAS.

Austin—Grading.—Flume, Rex & Charbonneau, of Fort Worth, have been awarded the contract for grading the Capitol grounds, previously mentioned, at \$33,000.

Beaumont—Planing Mill.—Olive & Sternberg have put new planing machinery in their mill.

Corsicana—Creamery.—A creamery is reported to be started soon.

Farwell—Brick-yard.—A stock company has been chartered to start a brick-yard.

Fort Worth—Residences.—J. O. Wright will erect a \$3,500 residence, and A. J. Armstrong, a residence to cost \$4,800.

Fort Worth—Buildings.—A party has plans prepared to erect a brick and stone residence to cost \$50,000.

Fort Worth—Building.—W. A. Huffman will erect a building, 100x90 feet, on Rusk street, and has let the contract for the stone work to Hoggart & Sanguinett.

Fort Worth—Building.—Mr. Monning, of St. Louis, Mo., will erect a two-story iron front building on Main street. It will be 50x100 feet.

Fort Worth—Building.—A four-story building, 50 feet front, will be erected at Main and Seventh streets by A. F. Byers.

Fort Worth—Ice Factory.—It is reported that another company has been formed to erect an ice factory.

Hillsboro—Laundry.—A steam laundry is reported to be started soon.

Jefferson—Oil Mill.—The Phoenix Cotton Seed Oil Mills, which have been idle for about two years, have been purchased by New York parties, who will put them in operation.

Mexia—Canning Factory.—A canning and evaporating factory is to be started.

Paris—Street Railroad.—The Paris Street Railroad Co. will extend their road at once.

Rusk—Wagon Factory.—The main building of the wagon factory mentioned last week as to be built by Mr. Devaney, of Tennessee, will be 300x35 feet. He has contracted for lumber and commenced work.

San Angelo—Building.—The Sisters of Charity will erect a brick convent building.

Sherman—Machine Shops, &c.—The St. Louis, Arkansas & Texas Railroad Co.

(office, St. Louis, Mo.) are about commencing work on their machine shops and round-house, previously reported.

Sulphur Springs—Oil Mill.—George Leder will erect the cotton-seed oil mill lately mentioned.

Texarkana—Canning Factory.—The Texarkana Canning Co. has been chartered to start a canning factory.

Texas—Coal Mines.—C. O. Patier, Chas. Lancaster, Louis Herbert, P. Callahan and others, of Cairo, Ill., will organize the Mt. Pleasant Coal & Mineral Co. to develop coal lands in Texas, 60 miles south of Texarkana. They have about 10,000 acres of coal lands.

Waco—College.—The directors of the Waco Female College contemplate erecting a new building to cost about \$60,000 or \$70,000.

Waxahachie—Temple.—The Masons will erect a temple.

Wolfe City—Flour Mill.—A roller flour mill is projected.

#### VIRGINIA.

Alexandria—Publishing.—Horace Ramey will publish a paper.

Alexandria—Fire-alarm System.—The putting in of a fire-alarm system is being agitated. The mayor can give information if anything is done.

Berkley—The Berkley Active Building & Loan Association, capital stock \$10,000, has been chartered.

Fort Monroe—Buildings.—Proposals for erecting three double sets of officers' quarters will be received until November 30 by Charles Bird, assistant quartermaster U. S. army. Full particulars can be had from him.

Lynchburg—School.—William W. Hurt will receive until November 10 bids for erecting a school building at Reusens.

Lynchburg—Church.—The new edifice reported last week as to be erected by the St. Paul's Episcopal Church will cost about \$40,000. They are now razing the old buildings on the site.

Lynchburg—Iron Works.—The Virginia Iron & Nail Works have let the contract for erecting a regenerative gas furnace, with a 22-foot working hearth, to M. V. Smith, of Pittsburgh, Pa. Its capacity will be for melting 45 tons of steel every 24 hours.

Lynchburg—Building.—B. A. Holt has the contract to erect a three story brick building, 68x40 feet, at Church and Tenth streets for Ferguson & Hutter.

Manchester—Spike Mill.—John T. Anderson, E. A. Saunders, R. W. Jefferey, Hyrd Warwick and others contemplate erecting a spike mill.

Newport News—Depot.—It is reported that the Newport News & Mississippi Valley Railroad Co. (office, Richmond) will build a new depot.

Newport News—Houses.—A. A. Low has let the contract for 24 houses.

Newport News—Ship-yard.—The Chesapeake Dry Dock & Construction Co., lately mentioned as purchasing and to remove to Newport News the plant of the Newburgh Ship Building Co. of Newburgh, N. Y., have let contracts for erecting buildings, driving piles, &c.

Richmond—Granite.—The contract for granite for the fourth story of the new city hall has been awarded to the Westham Granite Co. at about \$5,500.

Richmond—Tobacco Factory.—The Pace Tobacco Co. have purchased the machinery of the Boston Tobacco Co.'s factory at Boston, Mass.

Roanoke—Rolling Mill.—The Roanoke Rolling Mill Co. have let the contract for building the six heating furnaces for their rolling mill, previously reported, to James Wilson.

Seven Mile Ford—Lumber Mill.—Diggs & Duncan have started a saw mill of 10 M

feet daily capacity, shingle mill with a capacity daily of 20 M shingles and a lath mill with a daily capacity of 20 M laths.

Suffolk—Dish and Veneer Factory.—The Virginia Manufacturing Co. has been organized to manufacture butter dishes, veneer, &c., and will start a factory at once. E. Patterson has contracted to erect the building.

Virginia Beach—Well.—The Virginia Beach & Improvement Co. will sink an artesian well 600 feet deep.

#### WEST VIRGINIA.

Cottageville—Flour Mill.—It is reported that a roller flour mill is being built by Rhodes & McCoy.

Charleston—Guard Cribs.—The contract for building three guard cribs at the head of lock No. 2, Great Kanawha river improvement, has been awarded to Laytlen Williams, of Malden, W. Va., at \$4,328.

Charleston—Coal Mining, &c.—The Black Band Mining & Manufacturing Co., lately reported as chartered to mine coal, iron ore, &c., have organized with E. M. Farnsworth as president; E. M. Farnsworth, Jr., secretary and treasurer, and A. M. Wooldredge, general manager. They will develop the properties of the Black Band Iron & Coal Co. and the Kanawha & Coal River Railroad Co., lately purchased.

Moundsville—Rolling Mill.—Parties are negotiating for the Moundsville Rolling Mill with a view to putting it in operation. Joseph D. Weeks, Pittsburgh, Pa., can give information when anything definite is done.

Morris—Flour Mill.—E. C. Morris will shortly put another stand of rolls in his flour mill.

Parkersburg—Flour Mill.—Moosman & Co., previously reported as to improve their flour mill, have let contract for a new outfit of roller machinery. Work has been commenced.

Plymouth—Coal Mine.—W. P. Rend & Co., reported last week as opening a new mine, will have one of the largest mines in the Kanawha valley if the coal turns out as is expected.

St. Albans—Saw Mill.—Mohler & Son are building a saw mill.

St. Albans—Lumber Mills.—The Williamsport Lumber Co., lately mentioned as purchasing the Mohler saw mill property, are building new lumber mills. S. C. Rowland, of Port Deposit, Md., is interested in the company.

Wheeling—Iron Mining.—The Lawrenceville Iron Mining Co., lately mentioned as chartered by Edward S. Clark and others, of Pittsburgh, Pa., will soon commence operations.

The Maltbie Stone Co., of Philadelphia, Pa., contemplate moving their works to the South. They manufacture an iron granite stone.

Robert F. Darling, P. O. box 929, Seneca Falls, N. Y., contemplates starting a small machine shop and foundry at some point in the South, and wants to know of a good location where a repair shop is needed.

#### BURNED.

Alapaha, Ga.—The turpentine distillery of Brogden, Walker & Co., 4 miles from Alapaha.

Baltimore, Md.—The oyster and fruit canning factory of Platt & Co.; loss \$12,000. They will rebuild at once.

Calhoun, Ga.—The Times printing office. Will be re-established.

Covington, Ky.—The tannery of J. H. Deglow; loss \$60,000.

Covington, Ky.—The brewery of Meyer & Reidlin damaged \$3,000 by fire.

Dallas, Texas.—The planing mill of Bryd Webster; loss \$50,000.

Farmerville, La.—The mill and gin of Samuel Pipes, 6 miles from Farmerville.

Jonesville, N. C.—The whiskey distillery of J. S. Bryan.

Napoleonville, La.—The sugar-house of J. D. Ford & Co. damaged by a boiler explosion.

New Berne, N. C.—The Cuthbert machine shops; loss \$2,000.

Rock Hill, S. C.—The saw mill and cotton gin of Dr. W. B. Fewell, 3 miles from Rock Hill.

Shelby, N. C.—The printing office of Miller & Osborne, publishers of the Aurora.

St. James Parish, La.—The sugar-house on the Felicite plantation wrecked by a storm.

The gins of William Sanders, 6 miles from Anderson, Texas; estate of S. H. Dunson, in Troup county, Ga.; John Murchison, Athens, Texas; McKinney, Marrs & Kepler, Elmont, Texas; Capt. Henry Archer, Fla; W. P. Boatwright, 9 miles from Farmerville, La.; W. N. Molton, Salitpa, Ala.; G. B. Anderson and others, 4 miles from Laurens, S. C.; Frank & Co., Greenville, Miss.; Emmet A. Heard, 7 miles from Covington, Ga.; Daniel Shehee, Oglethorpe, Ga., and W. A. Parks, Cedar Grove, S. C., have been burned.

#### Will Rebuild Pine Fibre Mill.

WILMINGTON, N. C., Oct. 26, 1888.

*Editor Manufacturers' Record:*

We propose to rebuild our fibre mill immediately, putting in the most improved machinery, and make the new mill of larger capacity than the old one.

ACME MFG. CO.

#### To Increase Capacity.

NEW ORLEANS, LA., Oct. 26, 1888.

*Editor Manufacturers' Record:*

Our intention is to increase the capacity of our mills. Present capacity 125 dozen a day.

SOUTHERN HOSIERY MILLS.

#### Glass Works to be Rebuilt.

TALLAPOOSA, GA., Oct. 27, 1888.

*Editor Manufacturers' Record:*

The glass works which has been in successful operation here for the past two months were burned to the ground last Tuesday. They will be rebuilt at once and greatly enlarged. The former structure was of wood; the new building will be of brick. Work has already begun and the plant will be in operation by January 1st. The original works had only two departments—lamp chimneys and table ware. In the new plant will be added a bottle and sheet glass department.

J. H. PLUMMER.

#### Wagon and Plow Factory.

RUSK, TEXAS, Oct. 25, 1888.

*Editor Manufacturers' Record:*

A wagon and plow factory combined have made all their arrangements to operate a factory at New Birmingham, and have let a contract for the necessary buildings. We have some more industries that we will report in about ten days.

THE CHEROKEE LAND & IRON CO.

#### Cotton Mill.

STALEY, N. C., Oct. 27, 1888.

*Editor Manufacturers' Record:*

Most of our mill is running on yarns. Hope to have it all running in a few days. Are only waiting to get a few more spindlers. We on'y have 780 spindles at present and are running on 3 ply No. 8 carpet yarn.

RELIAANCE COTTON MILL CO.

DAWSON, GA., Oct. 24, 1888.

*Editor Manufacturers' Record:*

We will rebuild our grist mill and gins at once.

BRIM & BRO.

### MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Bowl Machinery.—J. C. Johnston, Mossy Creek, Tenn., wants to purchase machinery for manufacturing wooden bowls.

Carriage Machinery.—M. Dills, Carlisle, Ky., wants to purchase machinery to start a carriage factory; also lathes for turning hub and axle castings.

Dredging and Constructing Dams.—Proposals for dredging in harbors of Biloxi bay and Pascagoula river, Miss., and constructing a dam in Pascagoula river will be received until November 27 by A. N. Damrell, major of engineers, U. S. A., Mobile, Ala.

Engine.—Whitehead & Long, Winona, Minn., will soon want to purchase an engine.

Furniture, &c.—The Alleghany Pulp & Paper Co., Big Island, Va., want estimates for furnishing furniture, crockery, &c., for a new hotel.

Gas and Electric Light Fixtures.—Proposals for manufacturing and placing in position, in complete working order, combining gas and electric light fixtures for the U. S. buildings at Macon, Ga., Lexington, Ky., Clarksburg, W. Va. and elsewhere, will be received until November 3 by Hugh S. Thompson, acting secretary, Washington, D. C.

Heating Apparatus, &c.—Estimates for heating apparatus, glass, iron cresting, tiling and fence for the St. Joseph Catholic Church now being erected at Washington, D. C., are wanted. Address Rev. V. F. Schmitt, 313 Second street, N. E.

Laundry Machinery.—H. V. Batchelder, Tullahoma, Tenn., wants to purchase machinery for a steam laundry. He will want about 4 horse-power engine, 6 horse-power boiler, &c.

Lantern Posts, &c.—S. H. Berg, Aberdeen, Miss., wants price lists, &c., of bronzed lantern posts and wrought iron fence.

Pipe.—The superintendent street department of Charleston, S. C., is receiving bids for furnishing about 2 miles of terra cotta drain pipe, 12, 15 and 18 inches in diameter.

Steel Springs.—Robert Hoptonstall, Point Pleasant, W. Va., wants to correspond with any parties that manufacture or sell large steel springs for running light machinery that can be wound up with key or crank. About 1/2 horse-power is size wanted.

Vault Doors.—Thomas D. Fister, acting supervising architect, Washington, D. C., will receive until November 8 proposals for furnishing iron vault doors for the Government buildings at Baltimore, Md., Dallas, Texas, Galveston, Texas, Harrisonburg, Va., and elsewhere.

Veneer Machinery.—The Salem Veneer Works, Salem, N. C., want catalogues with prices and full particulars from the manufacturers of veneer machinery; also latest improved machinery for making baskets from veneering. They are now equipping their works.

#### To Enlarge Pulp Mill.

BIG ISLAND, VA., Oct. 28, 1888.

*Editor Manufacturers' Record:*

We are going to enlarge our pulp mill immediately and expect to build paper mill early part of next summer. Would be glad to have estimates on furnishing a new hotel with furniture, crockery, &c.

ALLEGHANY PULP & PAPER CO.

E. B. HALL, Manager.

### Additional Machinery.

GRANITE FALLS, N. C., Oct. 23, 1888.

*Editor Manufacturers' Record:*

We have put in the Brush electric light, 1,000 more spindles, 18 cards, 2 twisters, 1 picker.

GRANITE FALLS MFG. CO.

### Compress and Oil Mill.

CLEBURNE, TEXAS, Oct. 20, 1888.

*Editor Manufacturers' Record:*

Mr. Geo. B. Boomer, of New York, will erect a compress at Sulphur Springs, and I will erect a cotton seed oil mill there.

GEO. LEDER.

### Building Lumber Mill.

BREWTON, ALA., Oct. 25, 1888.

*Editor Manufacturers' Record:*

We are building a mill to manufacture timber and lumber.

LOVELACE BROS.

### Spoke Factory.

MEMPHIS, TENN., Oct. 24, 1888.

*Editor Manufacturers' Record:*

In the spring we will consolidate our two factories, now located at Union City and Rialto, and move them to Memphis and increase our capacity to 20,000 spokes per day.

BECK & GARDNER.

### Tobacco Factory.

MADISONVILLE, KY., Oct. 22, 1888.

*Editor Manufacturers' Record:*

I have about completed a house for handling tobacco in strips; capacity 150 hogheads strips. Size of house is 100 feet long, 40 feet wide and 24 feet high, to which will be added machinery for manufacturing plug tobacco, with steam drying apparatus. Cost of stemmery \$2,000.

VIRGIL M. SLATON.

### To Build Malleable Iron Works.

EMERSON, GA., Oct. 22, 1888.

*Editor Manufacturers' Record:*

A malleable iron plant will be built. Work will commence at once. Will require three buildings, 60x160 feet. Will employ 150 hands. To be located immediately on W. & A. R. R. at Emerson, in Bartow county, Ga., 43 miles north of Atlanta, Ga. Joshua Long, of Hartford, Conn., will build the works.

J. P. STEGALL.

### Cast Steel Plant.

NEWPORT, KY., Oct. 23, 1888.

*Editor Manufacturers' Record:*

This company will erect a 20 ton daily capacity aluminum open hearth cast steel plant at the Newport Iron & Steel Works. The process tested here dispenses with the puddling furnace entirely, and the cast-steel guaranteed to stand a tensile strength from 65,000 to 80,000 pounds per square inch, with 45 per cent. of reduction of area. The plant to be ready for operation on or before the 15th of January, 1889.

THE NEWPORT ALUMINUM & STEEL CO

### Furniture Factory.

BIRMINGHAM, ALA., Oct. 27, 1888.

*Editor Manufacturers' Record:*

The lumber company has sold its planing mill to S. E. Jones & Co., who are preparing to add a furniture factory.

GATE CITY LAND & IMP. CO.

### Building Saw Mill.

MACON, GA., Oct. 27, 1888.

*Editor Manufacturers' Record:*

We are building a saw mill at Wenona, Ga., and expect to be at work very soon. The name of our company is the Dooly Lumber Co.

R. C. WILDER & SONS.



### Our Congratulations.

Our congratulations are extended to our large constituency of subscribers to the MANUFACTURERS' RECORD. Before the next number reaches them the great controversy that quadrennially agitates American citizens will have been settled by the votes of the people. True to the position its editors have ever held, this journal has steadily maintained that while there were inequalities in the tariff laws of the nation that ought to be removed, still one principle ought to govern our national legislature in adjusting them, viz: to reduce the taxes, wherever that could be done without impairment of the protection idea. We have adhered to this principle through evil as well as good report, because the closest study of the past and present of American history has compelled us to believe that the prosperity and progress of the South were absolutely dependent upon the maintenance of protection in the United States tariff against foreign nations. Now that we are assured that this will be done, whoever may be elected president, we feel bound to congratulate our readers, who, with almost no exceptions, have both coincided with, and also cheered us in our endeavors to show that the future progress of the South would depend upon the acknowledgment, by the leading men of all political parties, that the policy of the past twenty-five years must be adhered to, and that tariff duties must be imposed, first, for the protection of American industries, and next and finally for the revenues necessary for the maintenance of the general government, and for the improvement of our rivers and harbors. In doing this we have not been partisans and have never advocated the election of any man or any set of men. We do not know at this writing who will be chosen President of the United States, but we do know that whether the present chief executive be continued, or Mr. Harrison be elected to succeed him, the House of Representatives will have a majority, composed of members of both the leading political parties, who will stand as firmly for protection as do the people who will elect them, and in this belief we renew our cordial congratulations to the whole country, but especially to the people of the South who now see a multitude of infant industries in their midst, that, fostered by protection, will soon become as strong as are all of the same kind in other parts of the Union. The money of

the world is slowly but steadily flowing into the South because capitalists know that while protection is the law of this country it will earn larger dividends there than it can anywhere else under the sun. Immigrants of the most desirable kind in Europe and America are turning their thoughts towards it. If, under protection, the nation continues to prosper the South will have such an inflow of capital and people as the world never saw before.

**THE Sugar Bowl & Farm Journal**, of New Iberia, La., commences its nineteenth year by appearing in a new dress and changing form to a 16-page paper. The improvement will be appreciated by its readers.

**THE enterprising Chronicle**, of Augusta, Ga., has issued its tenth annual trade review—a 16-page paper replete with facts and figures. From it we learn that Augusta's trade has reached a volume of \$63,000,000, last year's increase being \$7,000,000. Building improvements for the past year aggregate \$1,500,000, and the increase in commercial capital by new firms going into business last year was \$1,000,000.

### Will Build Charcoal Ovens.

**STRIKLING, TENN.**, Oct. 27, 1888.  
*Editor Manufacturers' Record:*  
We are getting material to commence the erection of 25 charcoal ovens to supply our furnace. Annual capacity will be something like 1,000,000 bushels. Have just completed new ore washer at cost of about \$8,000. **LA GRANGE FURNACE CO.**

### Will Enlarge Works.

**CLEVELAND, TENN.**, Oct. 23, 1888.  
*Editor Manufacturers' Record:*  
On account of increased trade we expect to enlarge our works at once. We have had our brick thoroughly tested by a number of the iron mills of the South, and in all they have proven satisfactory. We feel confident we make the best fire brick south of the Ohio river. We have been six weeks behind in our orders for three months, and still our brick are selling themselves without soliciting.  
**GEO. CARLYLE & SONS.**

### New Coal Mine.

**PLYMOUTH, W. VA.**, Oct. 27, 1888.  
*Editor Manufacturers' Record:*  
We are opening a new mine. It is sufficient to say that if the coal turns out as it is expected to do, we will have it one of the largest mines in the Kanawha valley.  
**W. P. REND & CO.**

### Furniture Factory.

**GADESSEN, ALA.**, Oct. 26, 1888.  
*Editor Manufacturers' Record:*  
A furniture factory will be established January 1, 1889, at this place. It will be owned and operated by **A. L. Morgan & Sons.**  
**J. R. NOULLEN.**

### PADUCAH, KY., Oct. 23, 1888.

*Editor Manufacturers' Record:*  
We are erecting a first-class steam roller flour mill at Rosington, of 50 barrels capacity; house 30x40, four stories, metal roof.  
**BUCKNER BRO. & TALLEY.**

### Wants to Move South

**SENNECA FALLS, N. Y.**, Oct. 19, 1888.  
*Editor Manufacturers' Record:*  
I intend starting a small machine shop and foundry in the South to do repair work. I also have several small articles to manufacture. I want to hear of some place that is in need of repair shop.  
**ROBT. F. DARLING, P. O. Box 927.**

### Building Planing Mill.

**ESTABUCHIE, MISS.**, Oct. 27, 1888.  
*Editor Manufacturers' Record:*  
We will complete inside of two weeks our planing mill; daily capacity 30,000 feet. We are equipped with the best of machinery in this department—hot blast dry-kilns from Standard Dry Kiln Co., Louisville, Ky., and planing machines of the latest improved style. We are also preparing to increase our capacity for sawing to 40,000 feet per day.  
**LEAF RIVER LUMBER CO.**

### Large Church to be Built.

**LYNCHBURG, VA.**, Oct. 29, 1888.  
*Editor Manufacturers' Record:*  
The vestry and congregation of St. Paul's Church, Lynchburg, Va., are preparing to build a handsome stone church on the corner of Clay and 7th streets, from designs furnished by Rogers, architect, Richmond, to cost upwards of \$40,000. They expect to lay the foundation this fall.  
**X.**

**CHATTANOOGA, TENN.**, Oct. 26, 1888.  
*Editor Manufacturers' Record:*  
We are now engaged in erecting saw mill at Asheville, N. C., and expect to get same in operation in January, 1889.  
**BUNCOMBE LUMBER & MFG. CO.**

**C. R. MAKEPEACE & CO.**  
**ARCHITECTS and MILL ENGINEERS**  
PROVIDENCE, R. I. Plans, Specifications and Estimates furnished for Cotton and Woolen Mills.

**LOCKWOOD, GREENE & CO.**

**MILL ENGINEERS,**  
NEWBURYPORT, MASS.  
PLANS AND SPECIFICATIONS FURNISHED FOR THE CONSTRUCTION, EQUIPMENT AND ORGANIZATION OF COTTON AND WOOLEN MILLS.

**FOR SALE.**  
**A Fifty Horse-Power Engine**  
**And Return Tubular Boiler**  
IN GOOD CONDITION. Address  
**Hagerstown Manfg. Co., Hagerstown, Md.**

**BANKERS AND BROKERS.**

**WILSON, COLSTON & CO.** [Members of Baltimore Stock Exchange.]  
**Bankers & Brokers,**  
216 E. Baltimore Street, Baltimore, Md.

Investment and Miscellaneous Securities a specialty, and large lines handled. Exceptional facilities for dealings in all classes of Southern Bonds. Loans on Collateral Securities negotiated. Quotations and information furnished on application, and correspondence invited.

**UNION LOAN AND TRUST COMPANY,**  
**BOSTON, MASS.**  
**Incorporated 1885. Capital Stock \$1,000,000.**

Authorized by charter to receive, hold and disburse money, securities or property in trust, and act as financial agent for any person, firm or corporation, National, State or Municipal authority.

Special Attention will be given to the Negotiating of Southern Bonds and Mortgages.

This Company has superior facilities for making collections throughout the entire country, having correspondents and agents established at all points. Correspondence invited.

**FOR SALE**  
**At a Bargain.**  
**A No. 4**  
**Hoyt Bros. Double Surfacar.**  
Address **J. MICHELS,**  
61 Fort St. East, Detroit, Mich.

**FOR SALE.**  
The Manufactured Stock, Supplies, Tools, Patents and Patterns of a well established  
**Hoe Manufactory.**  
The Patent is an exclusive one, covering a novelty.  
This is a rare opportunity of obtaining, for a very moderate sum, a first-class manufacturing business, simple in details.  
Address  
**E. D. ELY, Canton, Ohio.**

**The ALBANY**  
  
**BALTIMORE, MD.**  
ENTIRELY NEW. HOME-LIKE. ELEGANT.  
HIGHEST ELEVATION ON HANDSOME STREET  
**American Plan, \$3.00 to \$4.50 per day.**  
Telegraph for Rooms at our expense.  
**C. WARNER STORK, Proprietor.**

**A New Georgia Enterprise.**  
**Leak's Collecting and Protective Agency of Georgia.**  
—HEADQUARTERS, GRIFFIN, GA.—  
Offers to resident and non-resident creditors a safe and prompt method of collecting debts. Offers to furnish creditors, on application, the present standing of any firm in the state. This agency represents credit throughout the state to look after their outstanding accounts, to protect them in giving credit, and to notify them when any of their customers begin to get in bad shape. Its chief field of operations is directed to Commercial Channels, and will confine its workings solely to this state.  
This Agency will furnish an estimate of the Financial Standing and Reliability of any business firm doing business in this state, to commercial travelers or salaried men representing firms who are our patrons. Being familiar with the leading attorneys in Georgia, we have selected none except the leading and most reliable attorneys in the different cities and towns, and we can assure our patrons that claims sent to us will be immediately placed in the hands of attorneys able and reliable in every particular.  
We shall publish a book annually containing general information, and the same will be furnished to our patrons.  
Send your claims to S. G. LEAK, and correspond only with him at headquarters, Griffin, Ga. Address  
**S. G. LEAK, Manager,**  
**GRIFFIN, GA.**



## Items of Interest from Chicago.

[Special correspondence MANUFACTURERS' RECORD.]

CHICAGO, ILL., Oct. 27, 1888.

The manufacturers and jobbers in all lines of business report trade as very slow during the last three weeks. Of course there are exceptions to this condition of things, but they are confined to those houses who have some specialty not liable to be affected by the fluctuations of the market. It is generally conceded, however, that the volume of fall business in all lines of industrial machinery, hardware, &c., is fully up to that of the corresponding period of last year, and in many cases prominent houses report their sales ahead of last year's. This condition of affairs is accounted for by the fact that in September and the former part of October business was extremely brisk, many houses falling considerably in arrears of their orders. The general impression in trade circles here seems to be that the present stagnation is in a large measure to be attributed to the political campaign, and the opinion is freely expressed that so soon as the election is over we shall have a boom in business. Amongst the exceptions to those who report dull trade I found the following:

The Rice & Whiteacre Manufacturing Co. were interviewed by me yesterday, and I had a very pleasant chat with Mr. Rice. "We can't complain of any want of patronage in our line," said he; "in fact, we are behind with our orders. Our Triumph heater is what its name implies, a triumphant success, and we have a good demand for all our other lines. I don't think that there is much cause for complaint amongst the trade generally, and I am satisfied that the present depression is only temporary."

The American Well Works are having a good business. They are behind their orders in some lines, and their factory is being taxed to its full capacity to keep pace with their requirements. The high reputation that the concern enjoys is due not only to the excellence of their products, but to the honorable and straightforward manner in which they carry out their contracts. They recently sank a well for the Crescent Brewery, New Orleans, La., to a depth of 720 feet, an almost unprecedented feat. Any one needing well machinery should write them for their illustrated catalogue.

Wheeler & Tappan, of 14 South Jefferson street, report a lively demand for their steam pumps. They are manufacturing some novelties in this line that meet with a ready sale, and their shop, large as it is, is kept working full time with all the hands it can accommodate.

The Union Brass Architectural Works is another of the favored institutions. Mr. Cooper, the president of the concern, received your representative very cordially, and on being asked as to the condition of trade, smiled with satisfaction and said: "We are very much pleased with our business. We have all we can attend to and what is a still better feature, those for whom we do work make a point of recommending us very warmly to their friends. This is extremely gratifying to us, as it shows that our work is satisfactory and is properly appreciated. We have just finished the brass fittings of the American National Bank, Kansas City, Mo. It is conceded on all hands to be one of the finest pieces of brass work in the United States. From simply an artistic standpoint it is unrivalled, and is well worth a visit. We also furnished the brass decorative work for the National Bank, Helena, Mont. Our Baltimore friends will do well to inspect the bronze balustrades and newel posts in their new postoffice, which are no specimens of our work. We have also executed the ornamental work in the hotel at Huntington, and the Southern Insurance Building at Athens, Ga. A

very fine specimen of altar work was recently executed by us for the Dominican Church, Louisville, Ky. We also fitted up the office of the Standard Oil Co. at the same place, and the Union Depot at Birmingham, Ala." I would add that Mr. Cooper has personally done much to educate the public taste in artistic brass and bronze work. He has the advantage of long experience in his line, having been for many years in charge of a department for the Pullman Co. prior to his organizing his present corporation.

The Diamond Prospecting Co. report a very satisfactory business. Their prospecting drills are in large demand and continue to grow rapidly in public favor.

The Palmyra Manufacturing Co., Palmyra, Wis., have their Chicago office in the Montauk Block. This company is organized for utilizing the products of heat. They have acquired the Prosser patents, and claim they will inaugurate a revolution in the use of steam. The Prosser motor is completed and will shortly be given a public trial. This motor has attracted the attention of the leading railroad men in the West, and the public test of its qualities is being looked forward to with great interest in engineering circles. The company have been peculiarly fortunate in securing the services of Mr. A. A. Griffith as their manager, this gentleman's business ability and high social standing eminently fitting him for the charge of so important an undertaking. I hope to be able to furnish the readers of the MANUFACTURERS' RECORD with full details of the new motor very shortly.

Hutson's Giant Fire King chemical engine is the latest novelty in fire extinguishers, and is said to be one of the best on the market. It is manufactured by the Marinette Iron Works Co., of this city.

Mr. Martin, the genial and popular manager for the East Saginaw Manufacturing Co., reports a large and increasing sale for their wood pulley. Their factory is working full time and employs over 400 hands. This demand would indicate that the pulley is as good as it is claimed to be. G.

SIDNEY, KY., Oct. 11, 1888.

Editor Manufacturers' Record:

I am remodeling my mill and will be ready to run by November 1st, 1888. The capacity will be 40 to 50 barrels in 24 hours.

J. W. BOND.

## Brick Works.

CEDARTOWN, GA., Oct. 27, 1888.

Editor Manufacturers' Record:

We will start steam brick works. Capacity 30 M per day to start with, expecting to enlarge to 100 M capacity in short time. Hope to be in full operation by January 1st, 1889. It will be a stock company, with capital of \$5,000 to commence with and to be increased to \$20,000. Will be known as Cedartown Brick Co. W. E. WOOD.

## New York Iron Market.

Specially reported by WARREN, WOOD &amp; CO., Pig Iron, 115 Broadway.

NEW YORK, Oct. 30, 1888.

Pig Iron.—Business has been very quiet the past week, and most buyers show a disposition to await the result of the elections before placing large orders. Some few sales of 100 to 500-ton lots are reported, and prices are holding firm as last quoted, with indications of a decided advance in November or December.

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## PROPOSALS.

**PROPOSALS FOR CONSTRUCTION OF RIP RAP FOUNDATION.**—U. S. Engineer office, Cleveland, O., October, 12th, 1888. Sealed proposals, in duplicate, will be received at this office until 12 o'clock m. on Tuesday, the 6th day of Nov., at which time they will be opened in presence of bidders, for constructing 600 lineal feet, more or less, of rip rap foundation for breakwater at Cleveland, Ohio. All information can be obtained at this office. The United States reserves the right to reject any and all proposals. The sum allotted for the work, exclusive of the amount necessary for superintendence and office expenses, is about \$15,000. L. COOPER OVERMAN, Major of Engineers.

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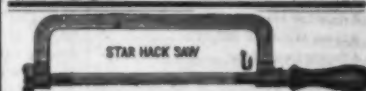
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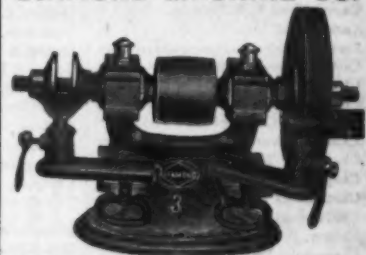
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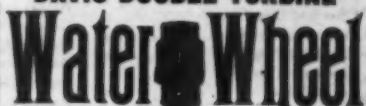
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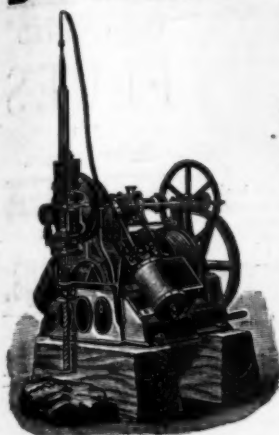






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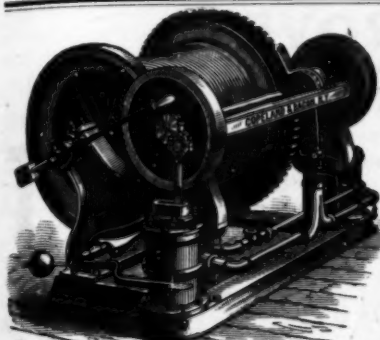
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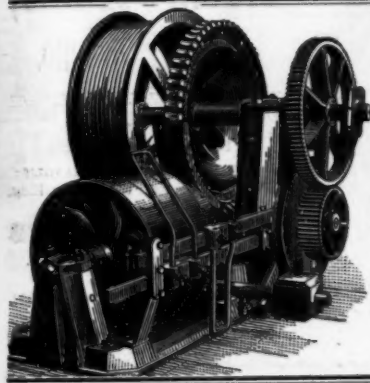
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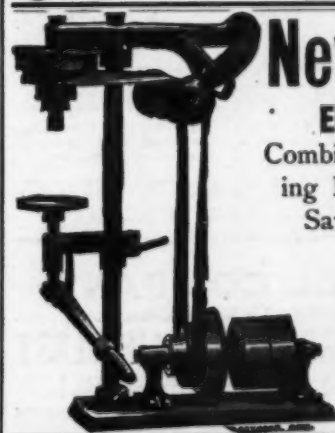
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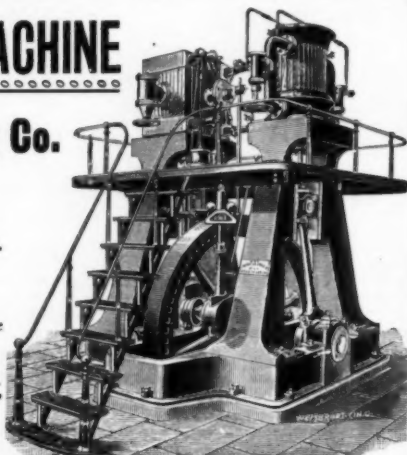
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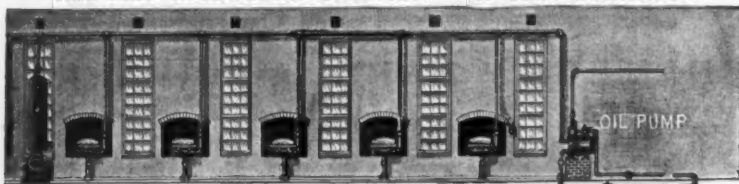
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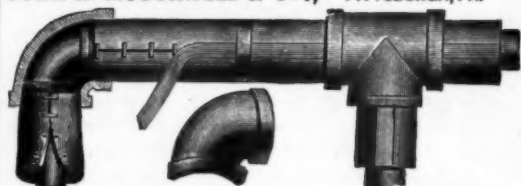
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Before purchasing your steam plant.

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## TO YOUR INTEREST



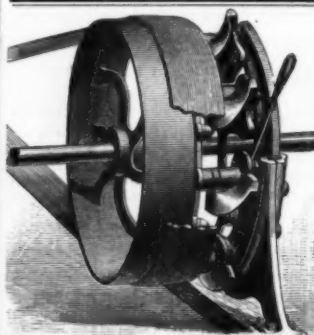
## HILL Clutch Works, CLEVELAND, OHIO.

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### POWER PLANTS

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mission Machinery.

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### FOR Friction Clutches,

EFFICIENT, DURABLE and CHEAP.

Perfect Working Guaranteed.

The Schenck Belt-Holder &amp; Shifter Co.

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## WALKER MANUFACTURING CO.

Shafting, Hangers,  
PULLEYS.

PULLEY CASTINGS

AND MACHINE-MOULDED

### GEARING

A Specialty.

Cleveland, Ohio.

Estimates furnished. Write for  
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## Shafting, Hangers.

Castings of every  
Description made.Stationary, Distillery  
Mill and Boiler Work.

100, N. MARQUETTE, 118 W. Falls Ave., BALTIMORE, MD.



## TRADE NOTES.

THE Griffith & Wedge Co., of Zanesville, Ohio, well known as extensive manufacturers of mining machinery, including stamp mills and stamp mill machinery, hoisting engines, mining cages and patent cars, smelters, Cornish pumps, etc., will shortly bring out some valuable improvements in patent mining and hoisting machinery. This concern reports business as unusually active with them. They have issued an 80-page catalogue of their machinery, which will be sent free upon application.

THE device for controlling belts, described in our last issue as the invention of Mr. U. H. W. Schenck, of New York, has been placed on the market in a very thorough and satisfactory manner. The manufacturers are securing some of the largest and best known machinery houses in the country as selling agents, thus leaving them ample time to devote to the prompt and careful filling of orders. The facilities for manufacturing are being again increased, as at present the capacity is but 20 machines a week.

H. P. EDMOND, Richmond, Va., dealer in engines, boilers, saw mills, &c., in a letter dated October 25, writes: "I am furnishing the Miller Mechanical School at Crozet, Va., with two 48-inch by 12-foot return tubular boilers complete with fixtures—boilers known as the 'Standard,' made by the Erie City Iron Works, Erie, Pa.; also putting in a vertical engine in the cheroot manufactory of Mr. P. Whitlock, of this city. Have put in about a dozen of the Otto silent gas engines in this city; they are giving entire satisfaction."

THE Phosphor-Bronze Smelting Co., Philadelphia, Pa., will furnish the trade on application with their price-list No. 6, just issued. This price-list contains a large amount of valuable information respecting their specialties. In it are to be found rules for ordering; prices for bronze, telegraph, telephone and twisted wire, wire cloth, bronze nails and castings, etc. Tables are also given showing the difference between wire gauges, and the approximate weight of bronze wire and sheets, bronze wire and plates and bronze bars and plates.

THE Jewell Belting Co., of Hartford, Conn., have the principal part of their tanning done in the South, where they own factories situated in Rome, Ga., and Jellico, Tenn. These factories are about equal in size, and have a combined capacity of 30,000 hides per year. They claim about equal facilities with any of the Northern States for help and other accommodations, help being cheaper, while bark can be had at a much lower figure, and can be procured in any quantity. This company have just finished a belt for a Western iron rolling mill of such dimensions as to be worth mention. It was 5 feet wide, 140 feet long, double thickness, and weighed about 1,600 pounds, and is intended to transmit 1,300 horse-power.

JNO. A. MCCONNELL & CO., 69 Water street, Pittsburgh, Pa., manufacture extensively all kinds of pipe and boiler coverings and asbestos goods. The following are some of their grades: Asbestos cement for plastering direct on the pipes or on wire netting to form air space, asbestos fibre and wool felt combination covering, mineral wool and wool felt combination covering, hair and asbestos lined coverings of every description. But their specialty is the celebrated Reed's sectional covering, of which there is more than 1,300 miles in use. Messrs. McConnell & Co. are an old established firm, having been many years in the business, and, from their reputation, we believe that any of our patrons needing anything in the covering heat, insulating or fire-proofing line, will do well to write them. See their advertisement on another page.

RADCLIFF, ROWE & CO., Cincinnati, Ohio, are doing a large business in the manufacture of saws, etc., their trade covering a large territory and their specialties being exceedingly popular. The plant of this concern is finely equipped and most conveniently ordered in every department, and employment is furnished to a large number of highly skilled workmen. The output of the house includes circular, shingle, top, gang, mill, drag, mulay, cross-cut, tobacco and one-man saws, turning web, machine knives, moulding bits, etc. The saws made here are of the very best sheet steel, which is kept on hand of every gauge and cut to any size required. The house carries a comprehensive line of band-saw blades, gummers, files, swages, emery wheels, leather and gum belting, and similar supplies. In the way of repairing the firm has every facility for gumming, straightening, filing and setting saws of every kind, and this constitutes an important feature of the business.

THE Glen Cove Machine Co., of Brooklyn, N. Y., report the following recent sales and contracts: An outfit of planers and moulders for the new mill of Brumley & Cutter; another heavy planer and matcher to John C. Orr & Co.; another moulder to Cross, Austin & Co.; moulder to Howard, Ivory & Shackleton; heavy planers and matchers and moulders for new mill of Michael Solan; moulder to the New York Cedarware Co., all of Brooklyn, N. Y.; moulder to the Knapp, Stout & Co. Company, Fort Madison, Iowa; moulder to the Williamsport Planing Mill Co., Williamsport, Pa.; moulder to McGeragle Bros., Newark, N. J.; heavy planer and matcher to the T. W. Harvey Lumber Co., and a double-decker flooring machine to the Soper Lumber Co., both of Chicago, Ill.; heavy planer and matcher to the Yesler Wood, Coal & Lumber Co., Seattle, W. T.; heavy planer and matcher to Curphy & Mundy, Vicksburg, Miss.; heavy planer and matcher to A. H. Krouskop, Richland Centre, Wis.; heavy planer and matcher to Wm. Kings Co., Newark, N. J.; planers and matchers to T. G. Paterson, surfacer to L. H. Mace & Co., both of New York city; a double-decker to E. H. Barnes, president Seaboard Lumber Co., Shooter's Island, N. Y.; heavy planer and matcher to Dickison & Allen, Syracuse, N. Y.; heavy planer and matcher to California Lumber Co., Porter, Oregon.

THE last electric street railway which has been constructed by the Thomson-Houston Electric Co., of Boston, Mass., was most successfully started on October 18, 1888. This road is in Washington, D. C., and is known as the Eckington & Soldiers' Home Railway. It is two and one-seventh miles in length and at present has three cars. It runs from Seventh street directly out New York avenue. As a fine piece of electrical engineering it stands without a superior. The overhead construction work is in every respect first-class, handsome ornamental iron poles having been used. After leaving New York avenue there are several quite sharp curves, but the grade in no part of the road exceeds three per cent., with the exception of a stretch of about 300 feet in Eckington, which has a grade of five per cent. The cars are 16 feet in length and of very handsome design, by far the handsomest in use in Washington on any street railway. They are each equipped with two Thomson-Houston Electric Co.'s motors. On Thursday, the 18th inst., at the invitation of the Thomson-Houston Co., the delegates to the American Street Railway Convention, which was then being held in Washington, inspected the road. They took several trips over the entire length of the line, and at the end of the trips expressed themselves in the highest terms of the construction of the road and the ease and certainty of the operation of the cars. This road was built by the Thomson-Houston Co. and reflects great credit upon their skill.

**Pumping and Power Wind Mills** adopted by U. S. Co. for superior workmanship and governing qualities. Agents wanted. Send 10 cts. for mailing catalogue and terms to agents.

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Aurora, Ill., U. S. A.  
Mention this Paper.

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One, Two and Three Spindle DRILLS.

Sensitive, STRONG —AND— Workmanship UNEQUALLED.

Special Machinery, Tools, Models, &c. Built by Day or Contract.

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Well-sinking and prospecting tools sent on trial. 250 feet has been sunk in 8 hours. Instructions for beginners. An Encyclopedia of 400 Engravings of well and prospecting tools, pumps, wind and steam engines. A treatise on gas and oil. Book free, mailing charges 25 cts. each.

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**QUEEN LUBRICANT**—Wanted a good house in every city and town to handle our Lubricant. Our goods have been well introduced.

**EUREKA MFG. CO.**  
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**Fine Office & Bank Fittings**—BRASS & WIRE WORK.

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**W. H. GOLDSMITH,** SOLE AGENT, FALL RIVER, MASS.

The only successful machine in the world for picking threads out of spinners' waste.

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**PUMPS**  
FOR MINING, FURNACES, FACTORIES, &c.

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For Ginning Sea Island and other Long Staple varieties.

It does the work rapidly and without breaking the staple. We back our recommendations with a warranty.

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MANUFACTURERS OF  
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Belt Hooks, Loom Forks and Wire Specialties.  
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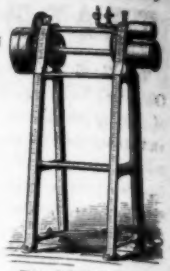
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Pronounced the Best by all Laundrymen using them. Dealer in

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IN THE MARKET, REMEMBER THAT THE Original Baldwinville Centrifugal Pumps ARE MANUFACTURED ONLY BY BOGGS & CLARKE, - SYRACUSE N. Y. Write for Catalogue and Prices.

COMPLETE STEAM PUMP ONLY SEVEN DOLLARS  
DEMAND THIS PUMP OF YOUR DEALER OR WRITE TO US FOR PRICES.  
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**VAN DUZEN & TIFT.**  
SOLE MAKERS CINCINNATI, O.

Steam Engines, Boilers, Steam Pumps,

Eclipse Fan Blowers, Tire Benders,

manufactured; all guaranteed. Also, the LANDIS PATENT STEAM RADIATOR supplied. Address

**The LANCASTER STEAM PUMP & MACHINE WORKS, Lancaster, Pa.**

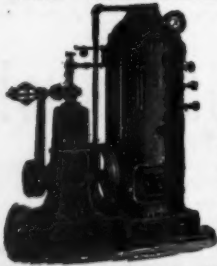


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IF YOU WANT THE MOST  
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Nothing to get out of order.

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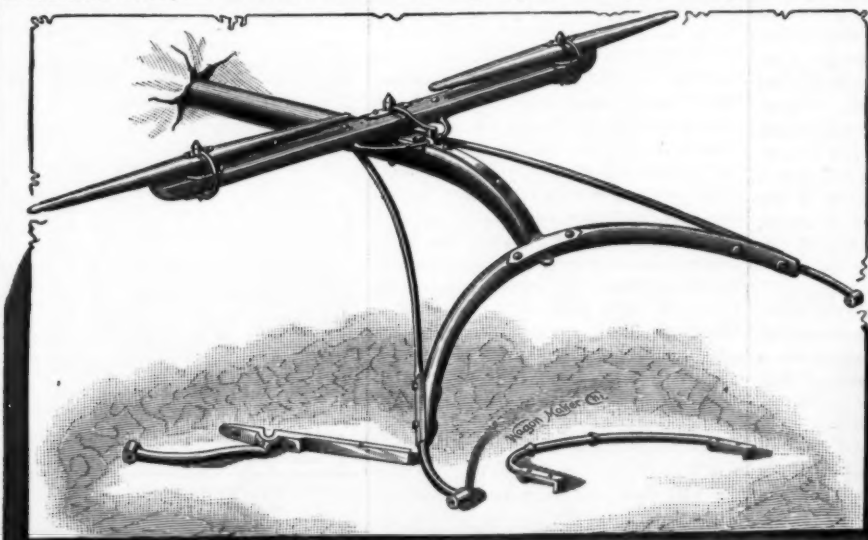
Eastern Office, 18 Broadway, New York.

74 & 76 W. LAKE STREET, CHICAGO, ILL.

**The FREELAND DOUBLETREE and SINGLETREE REGULATOR.**

[United States and European Patents granted December 6, 1887.]

We ask a careful examination of the "Freeland Doubletree and Singletree Regulator," upon which patents have just been issued. We claim it to be one of the most valuable, durable and cheap devices to which the attention of carriage manufacturers has been called. It is simple in construction and can readily be applied to Light and Heavy Single and Double Wagons, Sleighs, Mowers, Reapers, etc. For Double Carriages its use renders stay-straps unnecessary, holds the doubletree firmly in position, prevents rolling and rocking, at the same time relieving the bolt of strain, thus rendering it less liable to break. Should the bolt in doubletree break, this device holds doubletree firmly in place, thereby preventing accident. Should singletree break or trace



unhook, the regulator controls action of doubletree, thereby preventing neck yoke from leaving the pole. For single carriages, wagons or sleighs it holds the singletree firmly in position, preventing it from rolling or rocking, the same as in double carriages; the strain being taken off the bolt, dispensing with the use of stay straps. In the event of a trace unhooking the horse is prevented leaving the thills. For two-horse wagons extra heavy irons are made, with heavy clevis combined, and so constructed that by drawing the hammer the doubletree can easily be removed. The doubletrees are provided with clevis ready for use with chain, after removal. For Mowers and Reapers—it prevents the horses from being pulled back on cutting-bars, and is of great assistance in

turning corners by removing strain from end of pole, thus preventing it from breaking. It possesses great advantages over ordinary fastenings in point of strength, utility, safety and cheapness. We are also manufacturing CARRIAGE POLES AND THILLS, combining our Complete Regulator Attachments. The irons can easily be applied to old as well as new work, either by farmer or mechanic. We feel confident all will agree with us that the Regulator is worth all it costs for either of the following reasons: 1st. It holds doubletree and singletree firmly in position—no rolling or rocking. 2d. By its use stay straps and chains are rendered unnecessary. 3d. It prevents accident by reason of stay strap breaking. 4th. It prevents accident in event of bolts breaking. 5th. It imparts elegance to appearance of carriages. 6th. The general utility of Regulator.

**FREELAND & BRADLEY, Sole Manufacturers, Wellsville, Alleghany County, N. Y.**

**CLIFF'S R. H. WAGON SPRINGS, GET OUR PRICES. Titus & Babcock, Rochester, N. Y.**

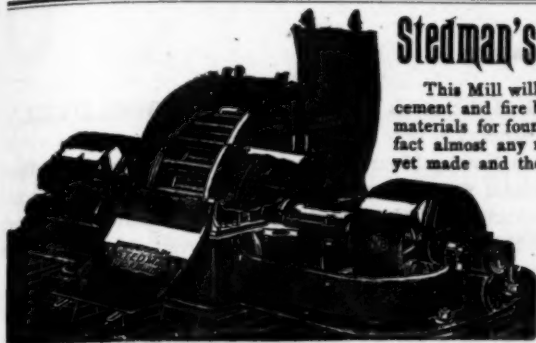


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## MINING MACHINERY, GOLD MILLS.

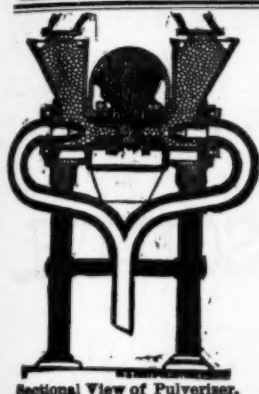


### Stedman's Improved Disintegrator and Pulverizer.

This Mill will disintegrate or pulverize materials of all kinds, for brick and tile, for cement and fire brick, and slag from open air furnaces for use in rolling mills, and materials for foundry facings, iron ores, animal matter in almost all conditions,—in fact almost any material that can be disintegrated. It is an improvement over any yet made and the result of practical experience.

Send for Descriptive Circular.

**STEDMAN'S**  
Foundry & Machine Works,  
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### PNEUMATIC PULVERIZER.

The principle of pulverisation consists in the employment of

#### TWO POWERFUL OPPOSING CURRENTS

of dry super-heated steam, so arranged that they continuously charge themselves with crushed or granulated material, and by the great force and velocity of the steam currents the minerals are dashed against each other with such power of concussion as to cause the hardest ores to be pulverized to any degree of fineness desired. The high temperature of the super-heated steam currents employed, through which every minute particles of ore must pass, causes them to become very hot and dry, which produces a beneficial effect upon sulphurets and ores containing rusty gold. The light weight and simplicity of construction of the Pulverizer, the extremely small and inexpensive wearing parts are the WONDER and SURPRISE of all who witness its operation. The Company are prepared to furnish complete plants for pulverizing

10 to 200 Tons Per Day,

including a Sectional Steam Boiler supplying all the power required.

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## WISWELL Ore Pulverizer and Amalgamator COMBINED.



The following testimonial from Mr. Marsden, of the firm of Farrel & Marsden, manufacturers of Stone Breakers and Ore Crushers, Ansonia, Conn., speaks volumes for the Wiswell Mill:

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GENTLEMEN—After carefully inspecting your mill and seeing it in operation, I do not hesitate to say that it is one of the best, if not the best pulverizer and most complete gold saving machine I have ever seen. Please accept congratulations for your success.

S. L. MARSDEN.

WE FURNISH A COMPLETE MILL FOR \$2,500, DELIVERED ON BOARD CARS.

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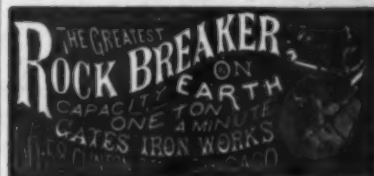
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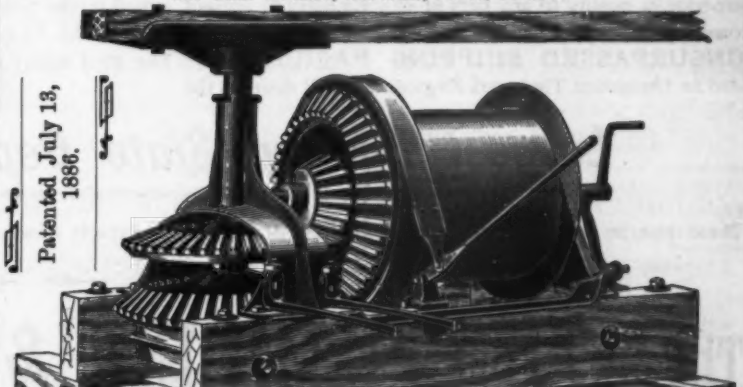
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AN IMPROVED HORSE POWER HOISTING MACHINE, with a combination of fast and slow speed. With fast speed a horse will lift 2,000 to 3,000 lbs. on a single line at a speed of 60 feet per minute, and with a single block 3,000 lbs. 40 feet per minute. With the slow speed a weight of 1 1/4 tons with a single line, and with a single block 3 tons; with two single blocks 5 tons; with double and single blocks 7 tons. The speed single line 30 feet per minute, with single block 15 feet per minute.

In this combination of gears the user has the advantage of two machines embraced in one, with a saving of 25 per cent. in cost and 60 per cent. in weight.

SIMPLE, DOES NOT GET OUT OF ORDER.

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### HORSE POWER HOISTING MACHINERY

For Bridge Builders, Contractors, Quarrymen, Mineral and Coal Miners, Masons and Builders.

DERRICKS AND CONTRACTORS' SUPPLIES. Mention this paper when you write.

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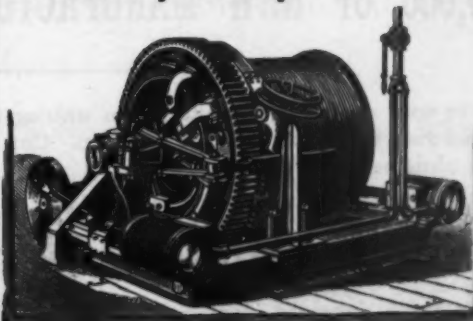
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Endless and Tail Rope  
Haulage Engines for

#### COAL MINES.

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Steam Engines, Boilers,  
Pumping Plants, Ca-  
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Sheaves, etc.

**AKRON, O.**



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THE COMING

→ Iron and Manufacturing City of the South. ←

Athens is the county seat of one of the most fertile counties in East Tennessee. The health of the city is unsurpassed, and is **ABSOLUTELY FREE FROM ALL MALARIAL OR EPIDEMIC DISEASES**. The surrounding scenery is very fine. From the main avenue the whole valley of East Tennessee can be seen, from the Cumberland Mountains on the west to the Great Smoky Mountains on the east; some of the tallest peaks east of the Rockies being in full view. **FINE MINERAL SPRINGS** are adjacent and are popular summer resorts. The society of Athens is excellent. A cordial welcome is extended to all law-abiding people locating in the town. The **EDUCATIONAL FACILITIES** are good. Beside public and preparatory schools, Athens is the seat of **THE GRANT MEMORIAL UNIVERSITY**, which has an enrollment of over 300, and whose graduates include some of the most distinguished citizens in the country. Among the industries and institutions of the place in active operation are:

**THE ATHENS BUILDING & LOAN ASSOCIATION, \$250,000.**      **THE ATHENS WOOLEN MILLS, \$100,000.**

**THE FIRST NATIONAL BANK, \$50,000.—To be increased at once.**

**FOUNDRY & MACHINE SHOPS, \$25,000.**

**FURNITURE WORKS, \$15,000.**

**FLOURING MILLS, \$20,000, etc.**

500 men are now at work on the new railroad from Athens to the

## RICHEST IRON FIELDS IN THE SOUTH.

JUST EAST OF THE TOWN.

Only eight miles from Athens are **VEINS OF RED FOSSILIFEROUS ORE 11½ FEET THICK**, and 4 to 12 miles beyond are **THE LARGEST DEPOSITS OF BROWN ORES IN THE SOUTH**. The ores of both varieties, in addition to being inexhaustible, are both superior in quality to any ores of either variety at present mined in the South. An assertion that can be sustained. Coke can now be obtained at the lowest prices, and in addition a new railroad is now projected to the Cumberland Coal Fields, only 22 miles distant. These roads will give Athens **UNSURPASSED SHIPPING FACILITIES**. The road under construction will penetrate large deposits of Tennessee Variegated Marble; also an Unopened Timbered Region, and will develop the

### *Largest Colored Slate Deposits in the United States.*

These quarries are now being opened, and are pronounced by experts Absolutely Inexhaustible, and equal in quality to the finest Vermont Colored Slate.

## The ATHENS MINING & MANUFACTURING CO.

Have alone just contracted for the erection of over

**\$500,000 IN NEW MANUFACTURING ENTERPRISES**

At Athens, including a 100-ton Blast Furnace, cost \$200,000; Cotton Mills, cost \$150,000; Furniture Works, employing 200 men, cost \$100,000; Hotel, cost \$60,000; Water Works, Street Car Lines, &c. These improvements have been commenced which, added to other improvements projected, will add

**\$1,000,000 OF NEW MANUFACTURING ENTERPRISES TO ATHENS.**

The company desire to open correspondence with parties desiring to locate, and will extend liberal inducements in addition to gifts of sites in order to induce New Manufacturing Enterprises to locate in Athens. City property is doubling in value every few months, and at present low prices is beyond question a very fine investment.

## The Athens Mining & Manufacturing Company,

R. L. BRIGHT, President

R. J. FISHER, Secy. and Genl. Manager.



# ROME, GA.

---

OF all the growing cities in the growing South, Rome presents the greatest opening for money-making investments. With surrounding fields as rich as the lands of Goshen, with exhaustless deposits of brown and red Iron Ores and Manganese immediately at hand on all sides, with mountains of Marble and Limestone coming right up to the city, with an abundance of the best Coal easy of access, areas of untouched forests, and with seven railroad outlets and two navigable rivers, Rome stands, in natural advantages, pre-eminently above any other proud and pretentious city within the limits of this proud and ambitious commonwealth.

---

## THE HEALTH OF ROME IS UNSURPASSED.

*THE UNUSUALLY LOW DEATH RATE IS A PHENOMENON,  
STANDING WITHOUT A PEER AT 8.40 PER THOUSAND.*

*NOT ONE CASE OF CATARRH OR CONSUMPTION EXISTS OR  
EVER ORIGINATED WITHIN HER LIMITS.*

---

Rome has 12,000 inhabitants, has invested in colleges and school buildings about \$300,000; in church building over \$100,000; in her new hotel \$125,000; in the dummy line, just completed, over \$50,000. Her manufactories employ 800 hands, with other enterprises now going up. Her system of water-works and sewerage is unsurpassed. The city is lighted with gas, and negotiations for an electric light plant are now pending. The highways leading to the city are all well macadamized. The Post-office Department has recently made Rome a free postal delivery office. The annual business of the city is about \$12,000,000, with the trade constantly increasing. The yearly range of temperature at Rome, between the average highest and lowest, is about 84 degrees; the mean temperature is 60.6 degrees. About seven months intervene between the first and the last killing frosts of the year. There is no better society to be found anywhere.

The Rome Land Company (J. W. Rounsaville, President, T. F. Howell, Treasurer, and J. L. Bass, Secretary and Business Manager) will donate ample grounds to, and otherwise aid, any worthy manufacturing enterprise that may locate here.

Send for circulars and pamphlets.

**HOOPE & TOWNSEND,**

MANUFACTURERS



**MACHINE AND CAR BOLTS,  
KEYSTONE BOILER RIVETS,**

MADE IN SOLID DIERS.

COLD PUNCHED, CHAMFERED, TRIMMED &amp; DRILLED SQUARE &amp; HEXAGON NUTS.

Bridge Rivets,

WASHERS,

Split and

Tank and Coopers'

Single 'Keys.

RIVETS.

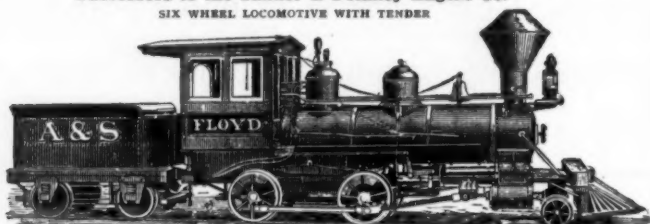
PHILADELPHIA, PA.

Established in 1865.

**The Richmond Locomotive & Machine Works, RICHMOND, VA.**

Successors to the Tanner &amp; Delaney Engine Co.

SIX WHEEL LOCOMOTIVE WITH TENDER



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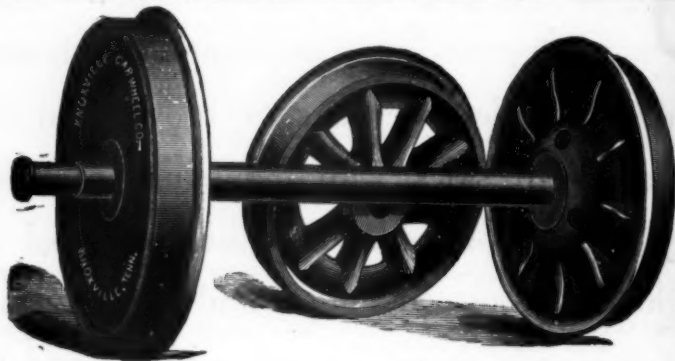
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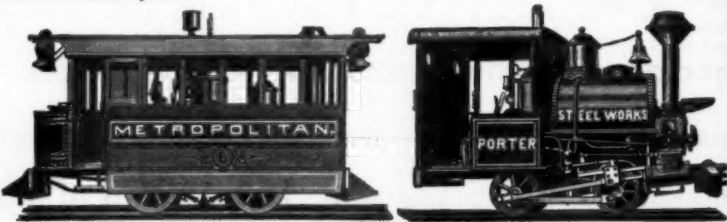
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## TRADE NOTES.

UDWELL WOODENWARE Co., of Indianapolis Ind., manufacture a fine line of specialties for the hardware and woodenware trades. Store-keepers in the South should write for their new descriptive catalogue and prices.

THE Hughes Steam Pump Co., Cleveland, O., report the trade in their line of goods as very brisk. They have been making extensive additions to their manufactory and are now working a largely increased force of men night and day.

BLAKESLEE MANUFACTURING Co., Du Quoin, Ill., have the contract for supplying the pumps and boilers for the water stations on the Paducah extension of the Cairo Short Line Railroad. They have just shipped a No. 6 pump for the use of this company at Pinckneyville, Ill.

THE Cambridge Roofing Co. report a good business in their specialties of patent roofing, siding and ceilings. They are one of the best established concerns in Cambridge, Ohio, and were awarded the first medal at the New Orleans Exposition on their celebrated Crowl's patent steel roofing.

THE American Supply Co., of Providence, R. I., say they are having a large demand for their oval dent reeds. One day last week they received orders for 1,100 reeds. They are having smaller orders nearly every day from all the mill districts, a good share of which is from the new mills lately constructed in the South.

J. E. BOLLES & Co's new patent iron and wire fencing, manufactured in Detroit, Mich., is having immense sales. It is a superior article, and costs no more than much of the old style of fencing. Their new catalogue contains many illustrations and designs that are new. They make a full and complete line of iron and wire work.

THE Sigourney Tool Co., of Hartford, Conn., part of whose business consists in the manufacture of light specialties, inform us that this department is fully occupied on orders that will keep them busy for six months. Their tool department is also receiving the usual number of orders, and their business has been but slightly affected by the political diversions of election year.

THE Belden Machine Co., of New Haven, Conn., successors of R. A. Belden & Co., of Danbury, Conn., who were burned out last June, have new works in complete running order with greatly increased capacity. The present location gives them many advantages always found in a large manufacturing city, not the least of which is water transportation along the entire range of sea coast.

THE Morris Machine Works, of Baldwinville, N. Y., established 22 years, have sold over 1,400 engines, which are now in use, in sizes ranging from 5 to 110 horse-power. Besides engines and boilers, they make the celebrated Baldwinville centrifugal pumping machinery for drainage and irrigation. They offer extraordinary inducements to buyers in the matter of prices and solicit correspondence.

MESSERS CALDWELL & PETERSON, of Wheeling, Pa., who make a specialty of the best quality of genuine sheet steel roofing, give away a full set of roofers' tools with each order of one square or more of any of their roofing material. Each roll contains nails and everything necessary, so that any man can be his own roofer. Their sheet steel and continuous (prepared) tin roofing can be shipped all over the world. They solicit correspondence from jobbing hardware houses and manufacturers' agents in the South, who will find it to their advantage to keep this roofing material in stock.

THE Egan Co., Cincinnati, Ohio, report having received medals at the Centennial Exposition held in that city on the following machines: No. 4 planer and smoother, dovetailer, slat tenoner, wood-worker and moulder combined, band and scroll saws, shapers, &c. Their large display of wood-working machines was fully appreciated by all who saw them, and their superiority was fully proven by the award of the judges.

THE Diamond Prospecting Co., of Chicago, Ill., sales agents for the Sullivan diamond prospecting drills, hoisting and hauling engines, are prepared at all times to furnish estimates on the cost of complete mining plants, and are contractors for prospecting mineral lands with their diamond core drill. They also make a specialty of underground haulage by wire rope for coal mines and solicit correspondence on the subject.

THE Hartford Steam Boiler Inspection & Insurance Co., Hartford, Conn., are enjoying a large business in the inspection and insurance of boilers. Many policies have recently been issued by them to cover loss or damage to boilers, buildings and machinery; also covering loss of life and accident to persons arising from steam boiler explosions. The company will be pleased to furnish full information as to their methods upon application.

THOSE wanting to purchase books on yachting, sanitation, engineering, minerals, metallic alloys, drainage, hydraulic machines, boilers and engines, etc., can find a full line on these subjects at E. & F. N. SPON'S, 12 Cortlandt street, New York. Embraced in their catalogue is a brief description of many books on the above and other important subjects, with prices, which on application they will furnish any one interested.

MERCHANT & Co., Philadelphia, Pa., in a tastily-printed folder, call attention to their several brands of roofing plates. These plates, because of their excellent quality, have met with a very large sale. This is not surprising when the manufacturers not only guarantee the quality, but also guarantee the weight, and stamp same on each box, that patrons may know just what they are getting. The trade always knows how to appreciate a good thing.

THE Empire Paint & Roofing Co., Philadelphia, Pa., report the following sales of gutta percha roofing:

	Sq. ft.
Florence Wooden Ware Co., Florence, Ala.	30,700
Vicksburg Cotton Oil Co., Vicksburg, Miss.	30,000
Stockton Lumber Co., Stockton, Ala.	30,000
Warren Oil Mills, Vicksburg, Miss.	10,000
Reynolds Iron Works, New Orleans, La.	15,000
Commercial Guano Co., Savannah, Ga.	35,000
St. Louis Cooperage Co., St. Louis, Mo., West	
Point Manufacturing Co., West Point, Ga.	
Atlantic Phosphate Co., Charleston, S. C.	30,000
Warren Glass Works, Uniontown, Pa.	30,000
Wells Plow Works, Jackson, Tenn.	15,000
Burgess Steel & Iron Co., Portsmouth, Ohio.	60,000
Pendleton Glass Co., Pendleton, Ind.	31,000
Russell Handle Co., Florence, Ala.	10,000

THE Penberthy improved automatic injector, which has within the past two years become a general favorite with the steam users of the United States, is a simple and reliable boiler feeder, and in a late pamphlet that the Penberthy Injector Co., of Detroit, Mich., have issued, we find a long list of testimonials from the largest traction, portable and stationary engine and boiler manufacturers in the United States and Canada, besides many from the large jobbers and dealers throughout the country, all of whom speak in the highest praise of it, its merits seeming to lie in the low price at which it can be sold and its great simplicity. A pamphlet will be sent upon application containing full information regarding these injectors. Their principal agents throughout the South are Thomas C. Bassor & Co., Baltimore, Md.; the Cameron & Barkley Co., Charleston, S. C.; Dewey Bros., Goldsboro, N. C.; the D. A. Tompkins Co., Charlotte, N. C.; Augustine & Co., Richmond, Va.; N. O. Railway & Mill Supply Co., Limited, New Orleans, La., of whom these injectors can also be obtained.

THERE has been a large lot of city lots recently platted at Cumberland Gap, Tenn. W. H. Coffman, of that place, will mail plats and full information of Cumberland Gap, and of the auction sale of city lots, which is to come off on the 14th of November, 1888. This is an important point, rich in coal and minerals. Railroads are building there. It might be well for some of the readers of the MANUFACTURERS' RECORD to give this important sale some attention. †

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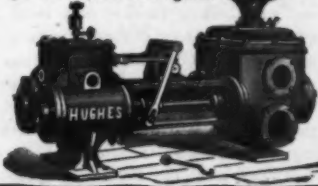
"The Colliau" New and Improved NOT BLAST CUPOLA, (patented March, 1884,) and New Smokeless and Automatic Feed Boiler, (patented 1886 in U. S.) Correspondence solicited for plans of foundries and the economical working of cupolas, the saving of fuel in melting iron and steel, and in the production of steam. Address VICTOR COLLIAU, Mechanical Engineer and Architect, 257 Jefferson avenue, Detroit, Michigan.

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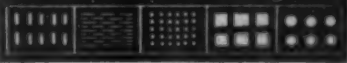
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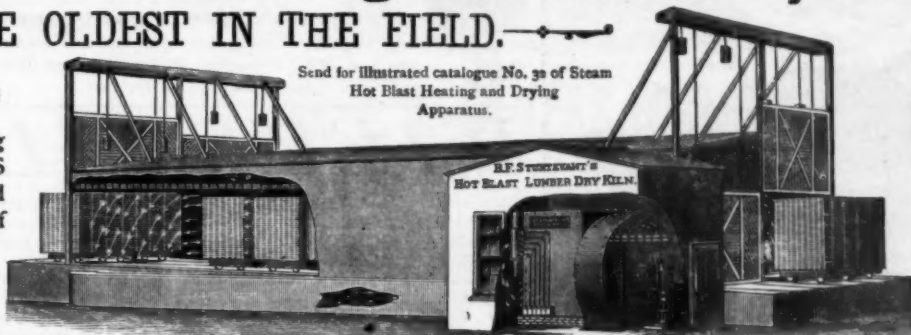
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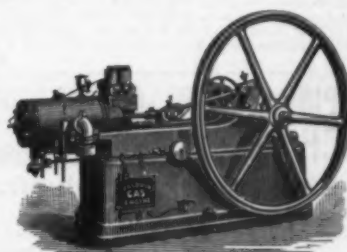
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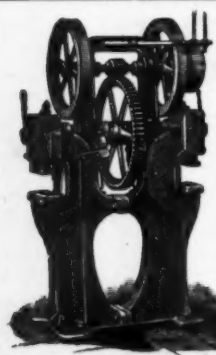
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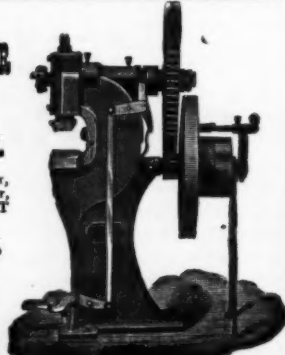
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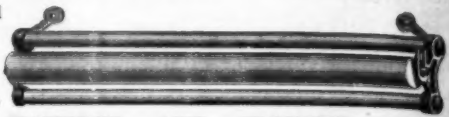
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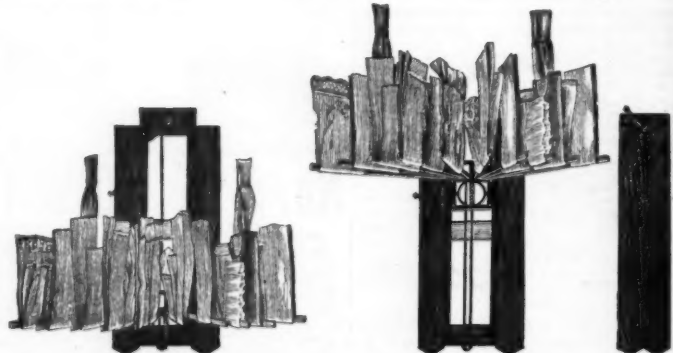
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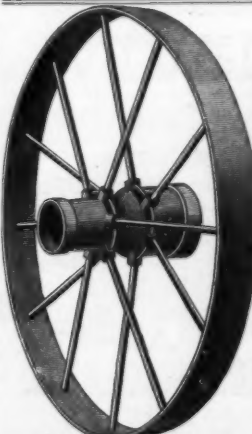
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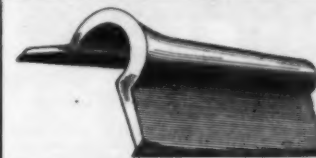
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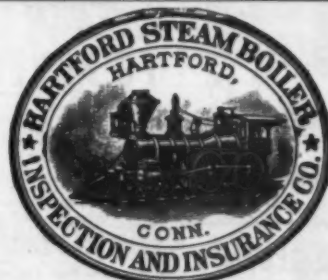
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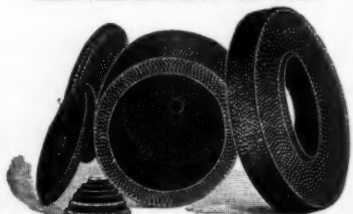


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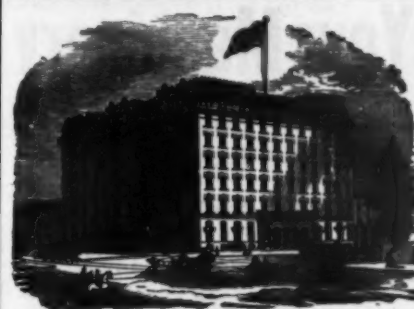
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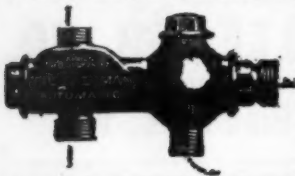
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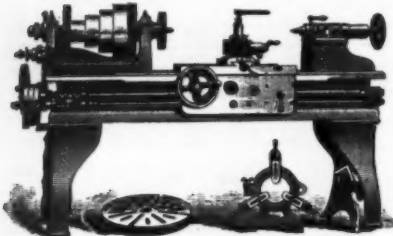
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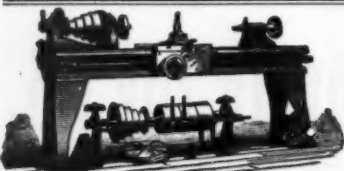
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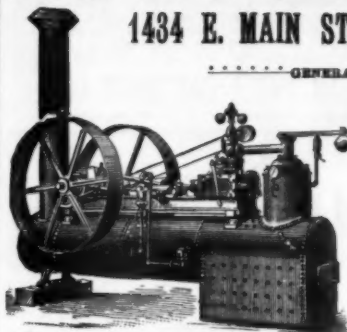
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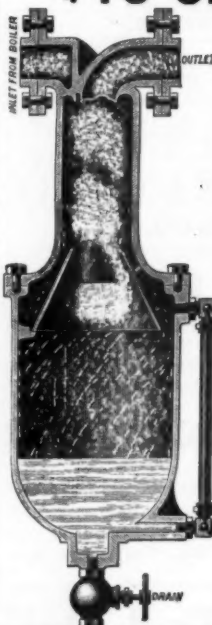
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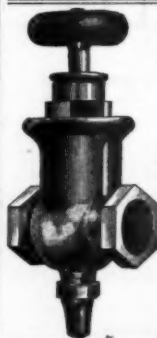
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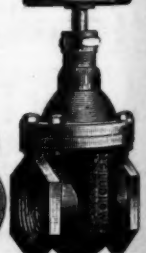
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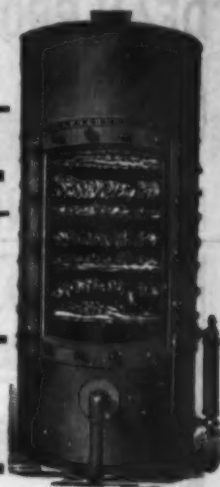
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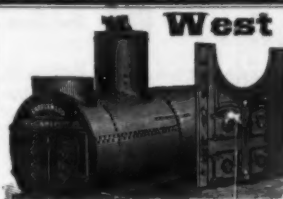
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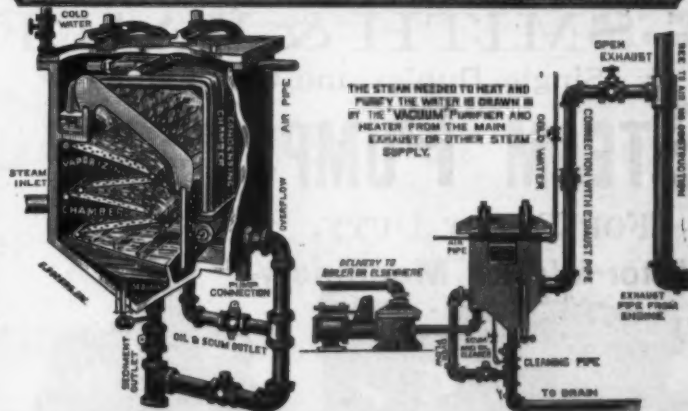
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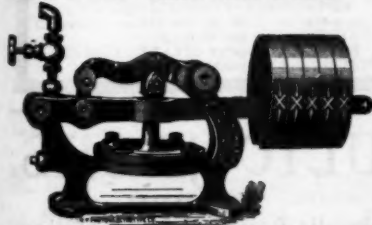
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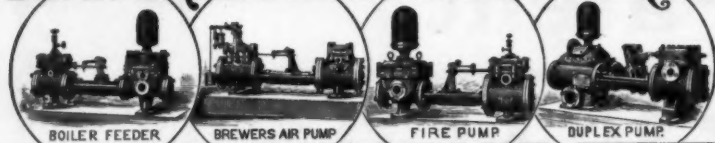
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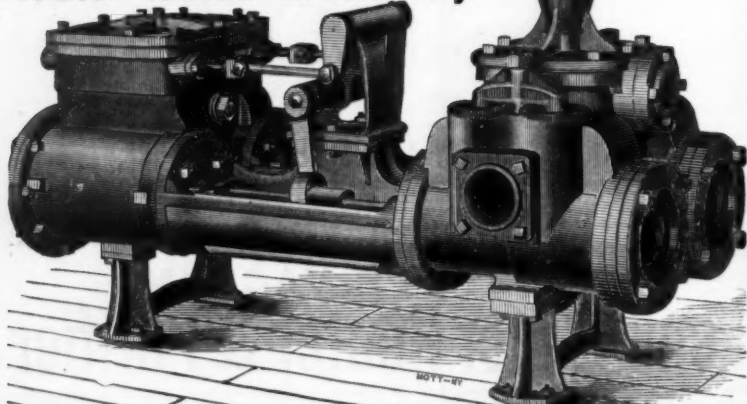
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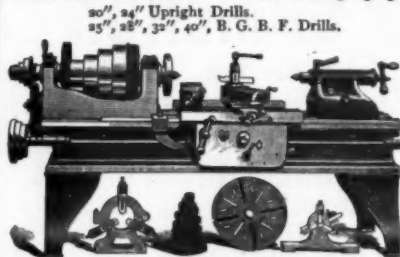



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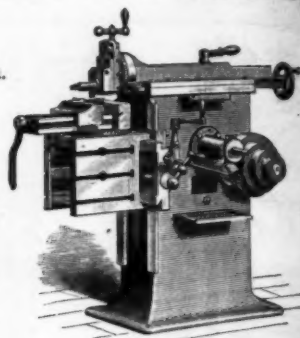


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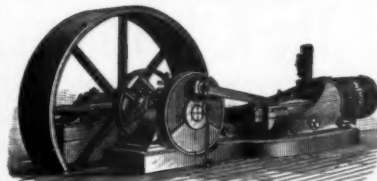


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